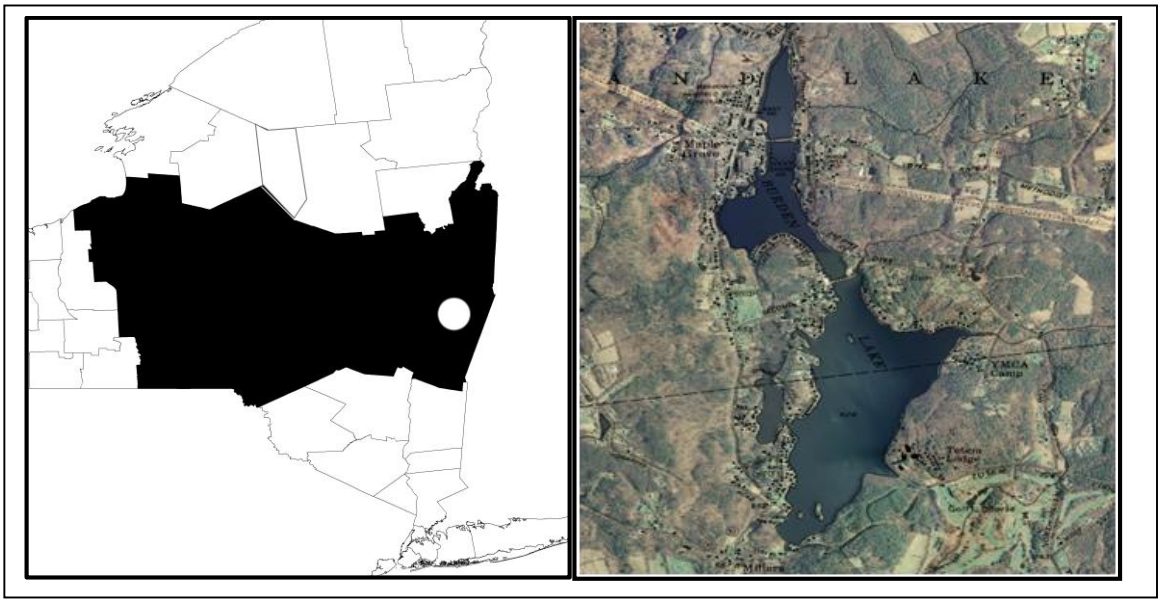
CSLAP 2015 Lake Water Quality Summary:
Burden Lake

General Lake Information

Location	Town of Sand Lake
County	Rensselaer
Basin	Lower Hudson River
Size	148 hectares (366 acres)
Lake Origins	Augmented by 24ft x 365ft earthen masonry dam (1916) at First Lake
Watershed Area	1,130 hectares (2,791 acres)
Retention Time	0.8 years
Mean Depth	3 meters
Sounding Depth	10 meters
Public Access?	no
Major Tributaries	no named tribs
Lake Tributary To…	unnamed outlet to Wynants Kill to Hudson River
WQ Classification	B (contact recreation = swimming)
Lake Outlet Latitude	42.604
Lake Outlet Longitude	-73.567
Sampling Years	1997-1999, 2003-2011, 2013-2015
2015 Samplers	Kevin Tighe
Main Contact	Kevin Tighe

Lake Map



Background

The Burden Chain of Lakes are three class B lakes comprising 369 acres in the towns of Nassau and Sand Lake in Rensselaer County, in Capital District area of New York State. The Third Lake was first sampled as part of CSLAP in 1997.

It is one of 11 CSLAP lakes among the nearly 375 lakes and ponds found in Rensselaer County, and one of 67 CSLAP lakes among the more than 3680 lakes and ponds in the Lower Hudson River drainage basin.

Lake Uses

Burden Lake is a Class B lake; this means that the best intended use for the lake is for contact recreation—swimming and bathing, non-contact recreation—boating and fishing; aesthetics and aquatic life. The lake is used by lake residents and invited guests for power boating and swimming, through residential shoreline access to the lake. There is no public access to the lake, although the public frequently access the lake via the dike or the culvert between the Second and Third Lakes.

Burden Third Lake is regularly stocked with approximately 7300 one to two inch walleye, although on occasion five inch fish were stocked. It is not known by the report authors if Burden Third Lake has been stocked by lake residents or municipal officials. Other fish species in the lake include Atlantic sturgeon, black crappie, bluegill, brown bullhead, largemouth bass, pickerel, pumpkinseed sunfish, rock bass, smallmouth bass, walleye, white sucker, white perch, and yellow perch.

General statewide fishing regulations are applicable in Burden Third Lake. In addition, the open season on walleye runs from 1st Saturday May through March 15th, with an 18 inch size limit and a daily take limit of three fish. Ice fishing is permitted.

There are no lake-specific fish consumption advisories on Burden Lake.

Historical Water Quality Data

CSLAP sampling was conducted on Burden Lake from 1997 to 1999, 2003 to 2011, and 2013 to 2015. The CSLAP reports for each of the past several years can be found on the NYSFOLA website at http://nysfola.mylaketown.com. The most recent CSLAP reports for Burden Lake will also be found on the NYSDEC web page at http://www.dec.ny.gov/lands/77846.html.

Burden (Third) Lake was sampled by the NYSDEC as part of the Lake Classification and Inventory (LCI) survey in 1996, and as part of the 1934 Biological Survey by the old Conservation Department (the predecessor of the NYSDEC). This survey, and the 1934 Biological Survey results, showed that:

- nutrient and algae levels in 1996 were higher than those generally recorded through CSLAP, particularly in recent years, resulting in water transparency readings that were lower
- deepwater phosphorus concentrations were highly elevated in 1996, although perhaps not significantly different than those measured through CSLAP. These deepwater nutrient levels peaked in late summer, similar to the pattern noted in recent (CSLAP) years
- at least part of the nutrient enrichment of these deep waters was probably triggered by phosphorus release from bottom sediments under anoxic (oxygen-depleted) conditions—

this was found in both the 1996 surveys and subsequent work conducted by the NYSDEC on the lake. Oxygen deficits occurred throughout the hypolimnion, with oxygen depletion below 15 feet. However, while anoxia was found in the deepest portions of Burden Third Lake in the 1934 survey- below 20 feet in depth, there were portions of the hypolimnion that still had sufficient oxygen to support all fish species.

None of the unnamed tributaries to or outlet of the lake has been sampled as part of the state Rotating Intensive Basins (RIBS) stream chemistry or state macroinvertebrate biological monitoring program.

Lake Association and Management History

Burden Lake is served by the Burden Lake Improvement Association. The lake association is involved in a number of lake improvement and social activities, including:

- aquatic plant control via herbicide and copper treatments conducted by an Association member and owner of Burden Aquatics, an aquatic herbicide application company
- limnological studies, including a 1970 masters thesis from St. Rose College
- annual meeting and picnic
- parade of boats
- causeway improvement and spring cleanup
- bass population restoration
- septic tank testing
- boat safety and breeding area restoration

The lake association maintains a web site at http://www.burdenlake.org and at https://www.facebook.com/pages/Burden-Lake-Improvement-Association-BLIA/264299626919816. .

Summary of 2015 CSLAP Sampling Results

Evaluation of 2015 Annual Results Relative to 1997-2014

The summer (mid-June through mid-September) average readings are compared to historical averages for all CSLAP sampling seasons in the "Lake Condition Summary" table, and are compared to individual historical CSLAP sampling seasons in the "Long Term Data Plots – Burden Lake" section in Appendix C.

Evaluation of Eutrophication Indicators

Lake productivity continues to decrease in Burden Lake. Water clarity readings were much higher than normal in each of the last three years, in response to much lower than normal algae levels. It is not known if this is in response to active management of algae (or nutrients), more favorable weather, or long-term biological changes, but this increase in water clarity and decrease in algae levels has been verified over the last decade. Phosphorus readings were slightly lower than normal in the last three years, and these readings have also decreased slightly over the last 15-20 years.

Water transparency typically deceases from June through October, consistent with an increase in algae levels over the same period, and despite no clear seasonal changes in phosphorus readings. In 2015, water clarity rose in late summer, consistent with a decrease in nutrient and algae levels.

The lake can be characterized as *mesotrophic,* or moderately productive, based on water clarity, total phosphorus and chlorophyll *a* readings (all typical of *mesotrophic* lakes), although the lake was more typical of lakes approaching *oligotrophy*, or very low productivity, in 2015. The trophic state indices (TSI) evaluation suggests that each of these trophic indicators is "internally consistent"—each of these indicators is in the expected range given the readings of the other indicators. Overall trophic conditions are summarized on the Lake Scorecard and Lake Condition Summary Table.

Evaluation of Potable Water Indicators

Algae levels were previously high enough to render the lake susceptible to taste and odor compounds or elevated DBP (disinfection by product) compounds that could affect the potability of the water, but the lake is not classified for use for drinking water (and algae levels have decreased since the late 1990s). Deepwater phosphorus and ammonia readings are slightly higher than those measured at the lake surface, but usually below levels of concern. This suggests that deepwater intakes may support "unofficial" potable water use, although deepwater anoxia was reported (via odor in bottom samples) in 2015. Potable water conditions, at least as measurable through CSLAP, are summarized in the Lake Scorecard and Lake Condition Summary Table.

Evaluation of Limnological Indicators

Conductivity has increased over the last half-decade, and these readings were higher than usual in 2015. pH has also increased over the last fifteen years, although these readings were close to normal in 2015. Color readings dropped slightly in 2015, but these readings have generally been higher since the 2002 lab change.

Chloride levels in the 2015 samples, conducted for the first time through CSLAP and cited in Appendix A, ranged from 46 to 51 mg/l. These values are within the range of "moderate" to "major" road salt runoff levels cited by the New Hampshire DES. These readings are well below the state potable water quality standard of 250 mg/l but above the range of values found in a number of NYS lakes.

Overall limnological conditions are summarized in the Lake Scorecard and Lake Condition Summary Table.

Evaluation of Biological Condition

The fluoroprobe data analyzed by SUNY ESF in recent years showed low overall algae levels and a low percentage of blue green algae during most of the summer, although both overall algae and blue green algae levels increase somewhat in the fall. This may have been in response to lake turnover, although deepwater phosphorus levels have been lower in recent years. The small number of shoreline blooms in recent years, including 2015, have not been characterized as "harmful" due to relatively low levels of blue green algae.

Macrophyte surveys have been conducted through CSLAP and the LCI study of Burden Lake. At least 14 aquatic plant species have been found, including at least two exotic plant species (*Myriophyllum spicatum,* Eurasian watermilfoil, and *Potamogeton crispus, curly*-leafed pondweed). The modified floristic quality index (FQI) for the lake indicates that the quality of the aquatic plant community is "fair". There is some indication that weed densities were higher in some portions of the lake in 2014.

The composition of the fish community is comprised of at least eight warmwater fish species, and at least five coolwater fish species. This suggests that the lake can most likely be characterized as a coolwater fishery. The relative (expected) weight of yellow perch appears to be lower than expected given the length of the fish.

Biological conditions in the lake are summarized in the Lake Scorecard and Lake Condition Summary Table.

Evaluation of Lake Perception

Recreational assessments were more favorable than usual in 2015, consistent with higher water clarity and more favorable water quality assessments. None of these measures of lake perception has exhibited any clear long-term trends, although the relative impact of water clarity and weeds on lake perception continue to vary from year to year. No seasonal trends in lake perception have been apparent in most years, and no seasonal trends were apparent in 2015. Overall lake perception is summarized on the Lake Scorecard and Lake Condition Summary Table.

Evaluation of Local Climate Change

Air and water temperature readings were close to normal in 2014, but both surface and bottom water temperatures have decreased over time. It is not known if this is an indication of local climate change or if these (climate) changes cannot be well evaluated through CSLAP.

Evaluation of Algal Toxins

Algal toxin levels can vary significantly within blooms and from shoreline to lake, and the absence of toxins in a sample does not indicate safe swimming conditions. Fluoroprobe readings are well below the threshold for harmful algal blooms (HABs) in open water samples, although the fluoroprobe data indicated slightly higher blue green algae levels in the fall in the last few years. Both open water and shoreline microcystin levels have been well below the threshold associated with unsafe swimming, including in 2015, and the very limited shoreline blooms have generally not been comprised of blue green algae.

Lake Condition Summary

Category	Indicator	Min	Annual Avg	Max	2015 Avg	Classification	2015 Change?	Long-term Change?
Eutrophication Indicators	Water Clarity	1.30	3.53	6.65	4.69	Mesotrophic	Higher Than Normal	Increasing Significantly
	Chlorophyll *a*	0.50	5.84	31.00	2.16	Mesotrophic	Lower Than Normal	Decreasing Significantly
	Total Phosphorus	0.007	0.012	0.027	0.010	Mesotrophic	Lower Than Normal	Decreasing Significantly
Potable Water Indicators	Hypolimnetic Ammonia	0.01	0.24	1.54	0.15	Elevated Deepwater NH4	Lower Than Normal	Not known
	Hypolimnetic Arsenic							Not known
	Hypolimnetic Iron							Not known
	Hypolimnetic Manganese							Not known
Limnological Indicators	Hypolimnetic Phosphorus	0.000	0.051	0.325	0.035	Close to Surface TP Readings	Lower Than Normal	Not known
	Nitrate + Nitrite	0.00	0.01	0.21	0.01	Low NOx	Within Normal Range	No Change
	Ammonia	0.01	0.02	0.18	0.03	Low Ammonia	Within Normal Range	No Change
	Total Nitrogen	0.05	0.36	0.79	0.36	Low Total Nitrogen	Within Normal Range	No Change
	pH	6.00	7.49	9.14	7.64	Circumneutral	Within Normal Range	No Change
	Specific Conductance	101	167	236	214	Intermediate Hardness	Higher than Normal	No Change
	True Color	1	8	26	5	Uncolored	Lower Than Normal	No Change
	Calcium	8.7	11.0	12.5	11.2	May be Susceptible to Zebra Mussels	Within Normal Range	No Change
Lake Perception	WQ Assessment	2	2.7	4	2.6	Definite Algal Greenness	Within Normal Range	No Change
	Aquatic Plant Coverage	1	2.5	4	2.1	Surface Plant Growth	More Favorable Than Normal	No Change
	Recreational Assessment	2	2.8	4	2.4	Slightly Impaired	More Favorable Than Normal	No Change
Biological Condition	Phytoplankton					Open water-low blue green algae biomass	Not known	Not known
	Macrophytes					Fair quality of the aquatic plant community	Not known	Not known
	Zooplankton					Not evaluated through CSLAP	Not known	Not known
	Macroinvertebrates					Not evaluated through CSLAP	Not known	Not known
	Fish					Coolwater fishery	Not known	Not known
	Invasive Species					Verile crayfish, Eurasian watermilfoil, water chestnut, curly-leafed pondweed	Not known	Not known
Local Climate Change	Air Temperature	8	22.1	39	22.3		Within Normal Range	Decreasing Significantly
	Water Temperature	10	21.8	29	21.9		Within Normal Range	Decreasing Significantly

Category	Indicator	Min	Annual Avg	Max	2015 Avg	Classification	2015 Change?	Long-term Change?
Harmful Algal Blooms	Open Water Phycocyanin	0	27	313	7	Most readings indicate low risk of BGA	Not known	Not known
	Open Water FP Chl.a	0	3	32	2	Few readings indicate high algae levels	Not known	Not known
	Open Water FP BG Chl.a	0	2	29	0	Few readings indicate high BGA levels	Not known	Not known
	Open Water Microcystis	<DL	<DL	0.8	<DL	Low to non detectable open water MC-LR	Not known	Not known
	Open Water Anatoxin a	<DL	<DL	<DL	<DL	Open water Anatoxin-a consistently not detectable	Not known	Not known
	Shoreline Phycocyanin					No shoreline blooms sampled for PC	Not known	Not known
	Shoreline FP Chl.a	2.6	26.7	73.2	2.6	Some readings indicate high algae levels	Not known	Not known
	Shoreline FP BG Chl.a	1.3	24.4	69.0	1.3	Most readings indicate high BGA levels	Not known	Not known
	Shoreline Microcystis	<DL	<DL	1.1	<DL	Low to non-detectable shoreline bloom MC-LR	Not known	Not known
	Shoreline Anatoxin a	<DL	<DL	0.0	<DL	Shoreline bloom Anatoxin-a at times detectable	Not known	Not known

Evaluation of Lake Condition Impacts to Lake Uses

Burden Third Lake is presently among the lakes listed on the 2008 Lower Hudson River Basin Priority Waterbody List (PWL), with recreation listed as *stressed* due to excessive algae and weeds. The PWL listing for Burden Lake is listed in Appendix B.

Potable Water (Drinking Water)

The CSLAP dataset at Burden Lake, including water chemistry data, physical measurements, and volunteer samplers' perception data, is inadequate to evaluate the use of the lake for potable water, and the lake is not used for this purpose. The rare shoreline blooms may threaten any "unofficial" potable water use from the surface waters of the lake, although algae levels have decreased in recent years.

Public Bathing

The CSLAP dataset at Burden Lake, including water chemistry data, physical measurements, and volunteer samplers' perception data, suggests that public bathing, if conducted at a public swimming beach, may be supported. Additional information about bacterial levels is needed to evaluate the safety of the water for swimming.

Recreation (Swimming and Non-Contact Uses)

The CSLAP dataset on Burden Lake, including water chemistry data, physical measurements, and volunteer samplers' perception data, suggest that recreation may be supported.

Aquatic Life

The CSLAP dataset on Burden Lake, including water chemistry data, physical measurements, and volunteer samplers' perception data, suggest that aquatic life should be supported, although this use may be *threatened* by road salt runoff. Additional data are needed to evaluate the food and habitat conditions for aquatic organisms in the lake.

Aesthetics and Habitat

The CSLAP dataset on Burden Lake, including water chemistry data, physical measurements, and volunteer samplers' perception data, suggest that aesthetics may be *poor* due to poor lake

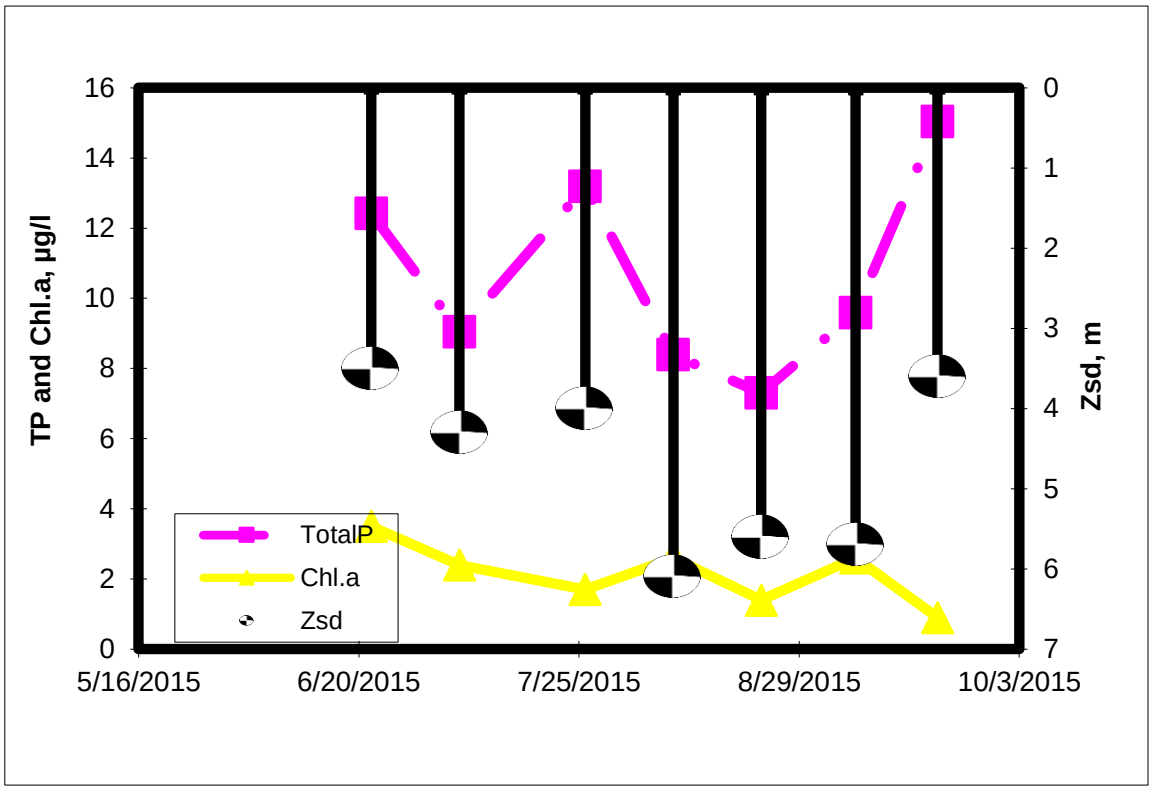
perception associated with shoreline algae blooms) and excessive weeds- the influence of either of these factors varies from year to year. Habitat may be *poor* due to invasive weeds, particularly Eurasian watermilfoil.

Fish Consumption
There are no fish consumption advisories posted for Burden Lake.

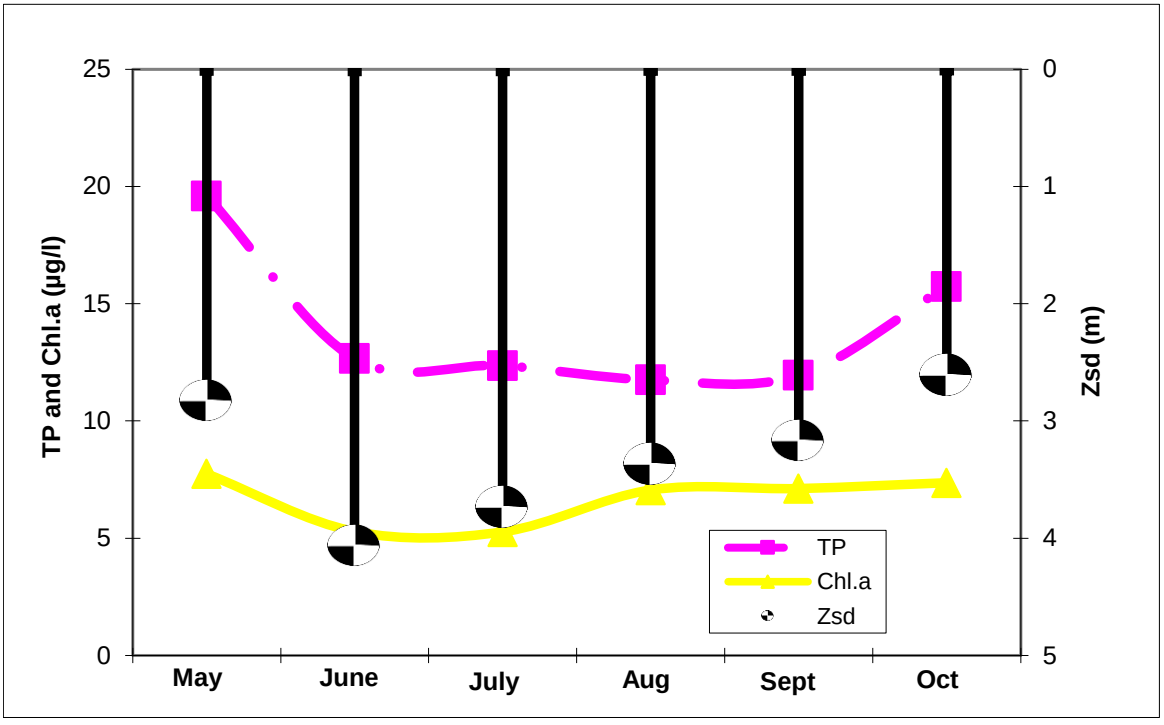
Additional Comments and Recommendations
Additional aquatic plant survey data may help to determine if the aquatic plant community is dominated by exotic plants, or if the occasional management of the nuisance weed problems in the lake has resulted in a shift to dominance by native plant species. Lake residents should report and avoid exposure to any shoreline algae blooms, particularly those fitting the definition of a blue green algae bloom.

Aquatic Plant IDs-2015
No plants were submitted for identification in 2015.

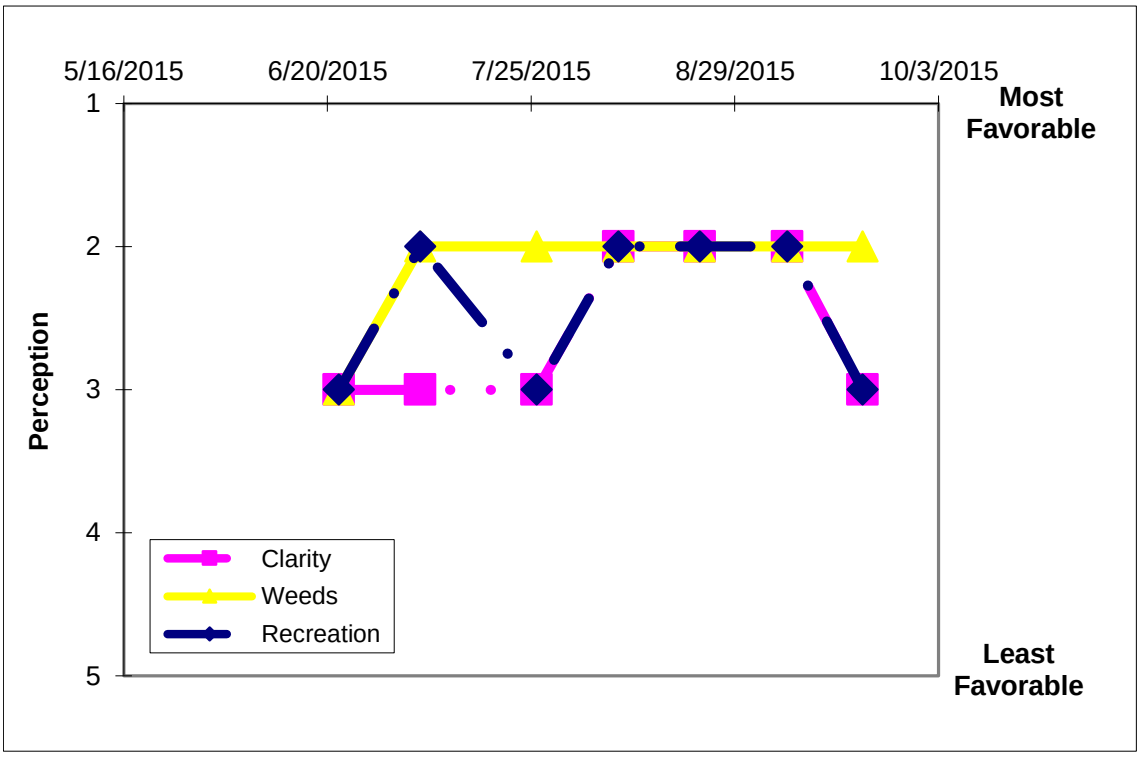
Time Series: Trophic Indicators, 2015



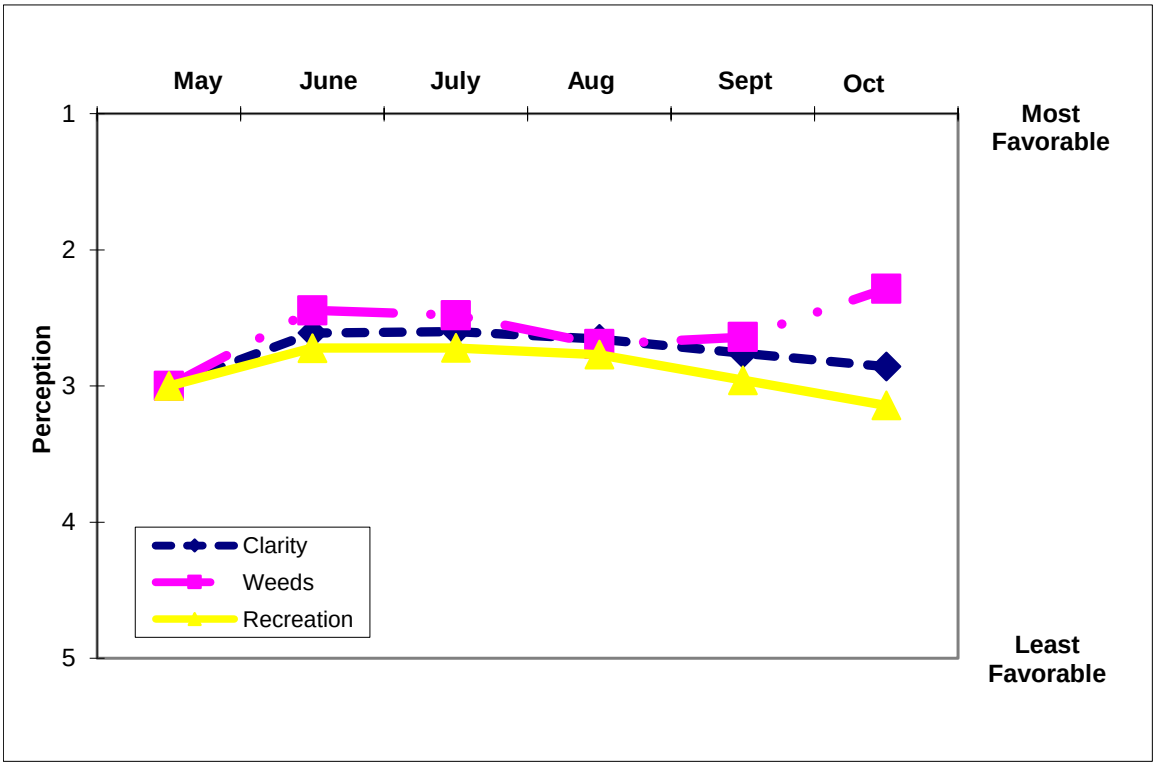
Time Series: Trophic Indicators, Typical Year (1997-2015)



Time Series: Lake Perception Indicators, 2015



Time Series: Lake Perception Indicators, Typical Year (1997-2015)



Appendix A- CSLAP Water Quality Sampling Results for Burden Lake

LNum	LName	Date	Zbot	Zsd	Zsamp	Tot.P	NOx	NH4	TDN	TN/TP	TColor	pH	Cond25	Ca	Chl.a	Cl
122	Burden L-3	5/26/1997		2.80	1.5	0.022	0.01				8	7.37	130		7.76	
122	Burden L-3	6/10/1997	10.2	2.90	1.5	0.017	0.01				10	7.60	136		3.97	
122	Burden L-3	6/23/1997	9.8	1.30	1.5	0.018	0.01				5	9.14	138		31.00	
122	Burden L-3	7/17/1997	9.1	2.00	1.5	0.016	0.01				5	7.42	137		16.50	
122	Burden L-3	8/12/1997	9.2	2.05	1.5	0.019	0.01				5	7.68	138		11.90	
122	Burden L-3	9/7/1997				0.015	0.01				5	7.50	136		12.20	
122	Burden L-3	6/2/1998	9.9	2.60	1.0	0.015	0.01				4	7.06	144		6.59	
122	Burden L-3	6/13/1999	9.5	4.20	1.5	0.013	0.01				7	7.31	162		2.88	
122	Burden L-3	6/23/1999	9.5	3.90	1.5	0.013	0.01				7	7.83	161		4.90	
122	Burden L-3	7/11/1999	9.0	2.30	1.5	0.015	0.01				12	7.56	161		5.45	
122	Burden L-3	7/25/1999	9.2	2.60	1.5	0.018	0.01				3	7.59	160		4.18	
122	Burden L-3	8/9/1999	9.0	1.95		0.018	0.01				3	7.82	169		6.75	
122	Burden L-3	8/26/1999	9.1	2.90	1.5	0.008	0.01				3	6.44	155		7.90	
122	Burden L-3	9/13/1999		4.00	1.5	0.008	0.01				6	6.33	166		3.73	
122	Burden L-3	9/27/1999	9.1	2.70	1.5	0.015	0.01				7	6.00	161		6.00	
122	Burden L-3	5/21/2003	9.5	2.85	1.5	0.017	0.01	0.01			17	7.20	179	11.0	7.73	
122	Burden L-3	6/8/2003	9.3	3.70	1.5		0.00	0.02	0.27		4	7.67	181		4.63	
122	Burden L-3	6/24/2003	9.5	3.05	1.5	0.013	0.00	0.01	0.25	18.62	3	7.32	180		9.46	
122	Burden L-3	7/7/2003	10.5	2.35	1.5	0.012	0.01	0.02	0.47	38.75	6	6.69	181		7.81	
122	Burden L-3	7/21/2003	9.8	1.90	1.5	0.015	0.00	0.02	0.49	31.84	8	8.55	186	12.0	12.62	
122	Burden L-3	8/4/2003	9.5	2.40	1.5	0.014	0.00	0.01	0.16	11.63	23	7.58	179		10.16	
122	Burden L-3	8/18/2003	9.5	2.20	1.5	0.014	0.00	0.01	0.31	22.40	4	7.40	175		10.96	
122	Burden L-3	9/2/2003		1.80	1.5	0.013	0.00	0.02	0.36	28.78	6	7.51	180		13.96	
122	Burden L-3	6/8/2004	10.0	4.20		0.012	0.02	0.03			8	6.63	204	11.9	12.99	
122	Burden L-3	6/23/2004	10.0	5.30	1.5	0.008	0.03	0.02	0.79	94.33	10	6.78	184		1.40	
122	Burden L-3	7/6/2004	10.0	3.50	1.5	0.007	0.02	0.01	0.29	40.15	10	6.25	106		4.80	
122	Burden L-3	7/21/2004	10.0	3.90	1.5	0.011	0.04	0.01	0.57	50.34	4	6.92	184		1.90	
122	Burden L-3	8/3/2004	10.0	4.80	1.5	0.010	0.02	0.01	0.20	20.29		7.51	188	10.9	0.50	
122	Burden L-3	8/17/2004	10.0	3.20	1.5	0.011	0.02	0.01	0.27	24.29	11	7.78	185		15.30	
122	Burden L-3	8/31/2004	10.0	2.80	1.5	0.010	0.01	0.01	0.30	28.98	5	7.63	164		6.40	
122	Burden L-3	9/14/2004	10.0	3.80	1.5	0.010	0.01	0.01				7.38	150		5.60	
122	Burden L-3	6/7/2005	10.0	2.50	1.5	0.018	0.03	0.01	0.13	7.33	20	8.07	170	12.5	2.47	
122	Burden L-3	6/22/2005	10.0	2.50	1.5	0.019	0.09	0.02	0.27	13.73	16	8.30	184		5.42	
122	Burden L-3	7/6/2005	10.0	3.70	1.5	0.011	0.01	0.01	0.20	18.16	5	7.88	188		2.32	
122	Burden L-3	7/21/2005	10.0	4.40	1.5	0.009	0.01	0.01	0.20	21.97		7.30	200		2.21	
122	Burden L-3	8/2/2005	10.0	3.10	1.5	0.010	0.21	0.02	0.51	51.24	5	7.75	173	11.5	3.79	
122	Burden L-3	8/16/2005	10.0	2.60	1.5	0.046	0.06	0.03	0.20	4.31		8.05	154		6.94	
122	Burden L-3	8/30/2005	10.0	2.00	1.5	0.010	0.01	0.01	0.14	13.65	4	7.18	130		11.41	
122	Burden L-3	9/14/2005	10.0	3.40	1.5	0.016	0.02	0.01	0.22	13.38	5	8.13	180		6.05	
122	Burden L-3	7/5/2006	10.0	2.95	1.5	0.013					13	7.07	154	9.9	5.45	
122	Burden L-3	7/19/2006	10.0	2.90	1.5	0.014	0.01	0.07	0.74	51.75		7.27	183		4.59	
122	Burden L-3	8/2/2006	10.0	2.20	1.5	0.011	0.01	0.02	0.59	52.95	10	8.40	171		10.35	
122	Burden L-3	9/6/2006	10.0	2.90	1.5	0.016	0.02	0.03	0.57	37.01	8	7.47	165		9.07	
122	Burden L-3	9/19/2006	10.0	2.80	1.5	0.013			0.54	41.03		6.80	144	10.9	8.69	
122	Burden L-3	9/26/2006		2.70	1.5	0.011	0.01	0.01	0.63	57.26	8	7.30	166		10.30	
122	Burden L-3	10/10/2006	10.0	2.40	1.5	0.016	0.01	0.06	0.43	26.78	11	6.77	165		10.61	
122	Burden L-3	10/24/2006				0.024	0.02	0.18	0.69	28.19		6.73	182		0.54	
122	Burden L-3	7/17/2007	10.0	5.20	1.5	0.010	0.01	0.02	0.54	125.92	10	7.42	154	11.2	2.72	
122	Burden L-3	8/1/2007	10.0	3.70	1.5	0.010	0.01	0.01	0.44	101.92	18	7.90	171		2.52	
122	Burden L-3	8/13/2007	10.0	2.80	1.5	0.009	0.00	0.01	0.52	123.62	5	7.63	160		3.12	
122	Burden L-3	8/23/2007	10.0	2.90	1.5	0.027	0.01	0.01	0.58	47.93	9	7.26	173		7.67	
122	Burden L-3	9/4/2007	10.0	2.70	1.5	0.012	0.00	0.02	0.49	92.37	15	7.76	151	11.3	6.43	
122	Burden L-3	9/13/2007	10.0	2.50	1.5	0.013	0.01	0.01	0.60	101.74		7.34	166		11.68	
122	Burden L-3	9/25/2007	10.0	2.40	1.5	0.012	0.00	0.01	0.50	90.13	8	7.52	161		8.00	
122	Burden L-3	10/3/2007	10.0	2.30	1.5	0.021	0.01	0.04	0.58	62.24	11	7.48	156		9.41	
122	Burden L-3	6/17/2008	10.0	5.40	1.5	0.008	0.01	0.04	0.22	63.35	6	7.33	144	10.7	2.12	
122	Burden L-3	7/1/2008	10.0	5.70	1.5	0.009	0.02	0.01	0.33	82.29	8	7.29	145		1.61	
122	Burden L-3	7/14/2008	10.0	4.90	1.5	0.017	0.06	0.06	0.26	32.39	11	7.56	154		4.25	
122	Burden L-3	8/3/2008	10.0	3.40	1.5	0.010	0.01	0.01	0.23	48.56	5	7.51	138		4.42	
122	Burden L-3	8/20/2008	10.0	3.40	1.5	0.015	0.01	0.03	0.25	37.54		7.69	155	10.1	7.59	
122	Burden L-3	9/8/2008	10.0	2.40	1.5		0.00	0.01	0.40	14.10	6	7.29	164		11.76	
122	Burden L-3	9/23/2008	10.0	2.80	1.5	0.011	0.01	0.01	0.32	64.94	5	7.16	155		6.32	
122	Burden L-3	10/7/2008	10.0	2.60	1.5	0.012	0.03	0.08	0.28	52.80	12	7.23	170		6.03	

LNum	LName	Date	Zbot	Zsd	Zsamp	Tot.P	NOx	NH4	TDN	TN/TP	TColor	pH	Cond25	Ca	Chl.a	Cl
122	Burden L-3	06/29/2009	10.0	3.90	1.5	0.016	0.00	0.02	0.24	32.87	11	6.57	170	11.4	3.67	
122	Burden L-3	07/12/2009	10.0	4.40	1.5	0.011	0.01	0.01	0.30	60.15	2	7.64	151		3.02	
122	Burden L-3	07/26/2009	10.0		1.5	0.010	0.01	0.02	0.22	48.57	10	7.86	124		4.00	
122	Burden L-3	08/09/2009	10.0	2.50	1.5	0.015	0.01	0.01	0.05	7.59	13	7.26	149		9.10	
122	Burden L-3	08/23/2009	10.0	2.50	1.5	0.011	0.01	0.03	0.33	65.01	17	8.09	133	8.7	9.80	
122	Burden L-3	09/06/2009	10.0	3.00	1.5	0.011	0.01	0.01	0.32	65.19	13	8.14	112		7.70	
122	Burden L-3	09/20/2009	10.0	2.60	1.5	0.014	0.01	0.01	0.25	41.23	9	6.98	128		8.10	
122	Burden L-3	10/04/2009				0.014	0.01	0.01	0.27	43.51	10	6.92	147		7.17	
122	Burden L-3	6/13/2010	10.0	4.60	1.5	0.011	0.05	0.03			5	7.59	179	11.9	0.50	
122	Burden L-3	6/27/2010	10.0	5.60	1.5	0.008	0.01	0.02			1	7.88	182		2.20	
122	Burden L-3	7/11/2010	10.0	4.70	1.5	0.014	0.01	0.01	0.37	56.22	5	8.15	192		3.30	
122	Burden L-3	7/27/2010	10.0	4.60	1.5	0.010	0.01	0.02			7	8.00	193		3.30	
122	Burden L-3	8/8/2010	10.0	5.10	1.5	0.011	0.02	0.02	0.26	50.56	8	8.20	154	9.7	3.60	
122	Burden L-3	8/29/2010	10.0	3.60	1.5	0.011	0.01	0.02	0.27	56.15	15	7.45	196		5.00	
122	Burden L-3	9/14/2010	10.0	3.30	1.5	0.012	0.01	0.02	0.31	58.29	5	6.77	210		0.70	
122	Burden L-3	10/3/2010	10.0			0.012	0.01	0.05	0.34	59.92	1	7.30	207		6.10	
122	Burden L-3	6/19/2011	10.0	4.10	1.5	0.010	0.02	0.04	0.17	38.06	7	7.38	190	9.3	2.40	
122	Burden L-3	7/5/2011	10.0	3.70	1.5	0.010	0.01	0.02	0.24	51.19	4	7.49	219		2.50	
122	Burden L-3	7/26/2011	10.0	2.30	1.5	0.012	0.01	0.01	0.31	55.98	5	7.82	195		5.40	
122	Burden L-3	7/26/2011	grab		bloom											
122	Burden L-3	8/14/2011	10.0	2.10	1.5	0.012	0.01	0.02	0.78	146.67	15	8.89	101		12.10	
122	Burden L-3	8/14/2011	grab		bloom											
122	Burden L-3	9/12/2011	10.5	2.70	1.5	0.009	0.01	0.04	0.42	106.93	13	7.46	153	12.1	8.40	
122	Burden L-3	9/21/2011	10.0	2.70	1.5	0.013	0.01	0.05	0.29	49.58	9	8.02	111		8.00	
122	Burden L-3	10/2/2011	10.3	2.30	1.5	0.016	0.01	0.04	0.31	43.58	26	7.24	161		1.50	
122	Burden L-3	10/16/2011	10.0	2.30	1.5	0.019	0.01	0.04	0.48	56.30	15	7.11	155		10.70	
122	Burden L-3	6/19/2013	10.5	5.50	1.5	0.013	0.07	0.04	0.34	57.17	9	7.35	191		1.60	
122	Burden L-3	7/16/2013	10.0	5.00	1.5	0.010					7	7.31	192			
122	Burden L-3	7/31/2013	10.0	5.30	1.5	0.010	0.01	0.02	0.32	69.52	7	7.79	187		1.60	
122	Burden L-3	8/18/2013	10.0	4.30	1.5	0.012			0.46	88.41	9	8.02	151		3.20	
122	Burden L-3	9/4/2013	10.0	4.50	1.5	0.008	0.01	0.01	0.36	94.72	9	7.56	183		2.10	
122	Burden L-3	9/15/2013	10.3	3.55	1.5	0.010			0.37	83.21	10	7.69	169		4.50	
122	Burden L-3	9/29/2013		3.45	1.5	0.014	0.01	0.02	0.38	58.75	6	7.57	168		2.80	
122	Burden L-3	9/29/2013	grab		bloom											
122	Burden L-3	10/14/2013	10.0	3.85	1.5	0.011			0.39	80.84	9	7.49	110		7.70	
122	Burden L-3	6/17/2014	10.0	6.30	1.5	0.008	0.02	0.03	0.30	84.29	2	7.24	213	11.1	0.50	
122	Burden L-3	6/29/2014	10.0	5.45	1.5	0.008			0.27	76.72	6	8.83	200		1.40	
122	Burden L-3	7/13/2014	10.0	4.15	1.5	0.011	0.01	0.02	0.33	64.25	6	7.06	185		2.00	
122	Burden L-3	7/29/2014	10.0	5.30	1.5	0.009			0.29	69.14	5	6.92	200		1.50	
122	Burden L-3	8/10/2014	10.0	6.65	1.5	0.007	0.01	0.02	0.27	86.06	4	8.30	153	11.1	1.70	
122	Burden L-3	8/24/2014	10.0	5.85	1.5	0.009			0.27	69.84	6	7.55	138		1.40	
122	Burden L-3	9/7/2014	10.0	5.05	1.5	0.008	0.01	0.03	0.28	77.42	4	7.09	108		2.80	
122	Burden L-3	9/23/2014	grab		bloom											
122	Burden L-3	9/23/2014	9.5	3.40	1.5	0.009					6	7.37	156		4.70	
122	Burden L-3	6/22/2015	10.0	3.50	1.5	0.011	0.03	0.03	0.24	20.79	6	7.35	229	10.9	3.50	
122	Burden L-3	7/6/2015	10.0	4.30	1.5	0.008			0.29	35.42	8	7.47	183		2.40	
122	Burden L-3	7/26/2015	10.0	4.00	1.5	0.012	0.01	0.03	0.31	25.37	7	6.80	236		1.70	50.7
122	Burden L-3	8/9/2015	9.5	6.10	1.5	0.008			0.44	57.53	5	7.67	194		2.60	
122	Burden L-3	8/23/2015	10.0	5.60	1.5	0.007	0.01	0.03	0.33	49.55	6	8.09	213	11.4	1.40	
122	Burden L-3	9/7/2015	10.0	5.70	1.5	0.009			0.53	59.77	3	8.18	232		2.60	
122	Burden L-3	9/27/2015	grab		bloom											
122	Burden L-3	9/20/2015	10.0	3.60	1.5	0.014	0.00	0.02	0.36	25.72	3	7.92	211		0.90	46.3
122	Burden L-3	6/2/1998	9.9		8.9	0.071										
122	Burden L-3	5/21/2003			8.5	0.021	0.01	0.13								
122	Burden L-3	6/24/2003			9.0	0.032	0.03	0.30	0.42	13.12						
122	Burden L-3	7/7/2003			9.0	0.060	0.43	0.02	0.40	6.70						
122	Burden L-3	7/21/2003			8.0	0.067	0.00	0.29	0.34	5.11						
122	Burden L-3	8/4/2003			8.0	0.039	0.01	0.11	0.11	2.85						
122	Burden L-3	8/18/2003			8.5	0.080	0.00	0.37	0.37	4.61						
122	Burden L-3	9/2/2003			8.0	0.112	0.00	0.57	0.37	3.30						
122	Burden L-3	6/8/2004	10.0		10.0	0.061	0.01	0.28								
122	Burden L-3	6/23/2004	10.0		8.5	0.014	0.02	0.07	0.37	26.40						
122	Burden L-3	7/6/2004	10.0		8.5	0.012	0.02	0.09	0.25	21.05						
122	Burden L-3	7/21/2004	10.0		8.5	0.030	0.06	0.02	0.25	8.58						
122	Burden L-3	8/3/2004	10.0		8.5	0.038	0.07	0.04	0.76	20.10						
122	Burden L-3	8/17/2004	10.0		8.5	0.038	0.01	0.02	0.38	9.99						

LNum	LName	Date	Zbot	Zsd	Zsamp	Tot.P	NOx	NH4	TDN	TN/TP	TColor	pH	Cond25	Ca	Chl.a	Cl
122	Burden L-3	8/31/2004	10.0		8.5	0.056			0.30	5.30						
122	Burden L-3	9/14/2004	10.0		8.5	0.039	0.01	0.21	0.06	1.44						
122	Burden L-3	6/7/2005			8.0	0.023										
122	Burden L-3	6/22/2005			8.5	0.013										
122	Burden L-3	7/6/2005			8.5	0.011										
122	Burden L-3	7/21/2005			8.5	0.085										
122	Burden L-3	8/2/2005			8.5	0.082										
122	Burden L-3	8/16/2005			8.5	0.078										
122	Burden L-3	8/30/2005			8.5	0.123										
122	Burden L-3	9/14/2005			8.5	0.034										
122	Burden L-3	7/5/2006	10.0		8.5	0.029										
122	Burden L-3	7/19/2006	10.0		8.5	0.096										
122	Burden L-3	8/2/2006	10.0		8.5	0.049										
122	Burden L-3	9/6/2006	10.0		8.5	0.068										
122	Burden L-3	9/19/2006	10.0		8.5	0.058										
122	Burden L-3	9/26/2006			8.5	0.059										
122	Burden L-3	10/10/2006	10.0		8.5	0.020										
122	Burden L-3	10/24/2006				0.021										
122	Burden L-3	7/17/2007	10.0		8.5	0.009										
122	Burden L-3	8/1/2007	10.0		8.5	0.005										
122	Burden L-3	8/13/2007	10.0		8.5	0.003										
122	Burden L-3	8/23/2007	10.0		8.5	0.325										
122	Burden L-3	9/4/2007	10.0		8.5	0.046										
122	Burden L-3	9/13/2007	10.0		8.5	0.011										
122	Burden L-3	9/25/2007	10.0		8.5	0.010										
122	Burden L-3	10/3/2007	10.0		8.5	0.000										
122	Burden L-3	6/17/2008	10.0		8.5	0.054										
122	Burden L-3	7/1/2008	10.0		8.5	0.036										
122	Burden L-3	7/14/2008	10.0		8.5	0.001										
122	Burden L-3	8/3/2008	10.0		8.5	0.031										
122	Burden L-3	8/20/2008	10.0		8.5	0.093										
122	Burden L-3	9/8/2008	10.0		8.5	0.044										
122	Burden L-3	9/23/2008	10.0		8.5	0.023										
122	Burden L-3	10/7/2008	10.0		8.5	0.013										
122	Burden L-3	06/29/2009	10.0		8.5	0.041		0.10								
122	Burden L-3	07/12/2009	10.0		8.5	0.039		0.01								
122	Burden L-3	07/26/2009	10.0		8.5	0.079		0.08								
122	Burden L-3	08/09/2009	10.0		8.5	0.069		0.32								
122	Burden L-3	08/23/2009	10.0		8.5	0.112										
122	Burden L-3	09/06/2009	10.0		8.5	0.116		0.45								
122	Burden L-3	09/20/2009	10.0		8.5	0.100		0.44								
122	Burden L-3	10/04/2009				0.008		0.30								
122	Burden L-3	6/13/2010	10.0		8.5	0.014		0.23								
122	Burden L-3	6/27/2010	10.0		8.5	0.012		0.13								
122	Burden L-3	7/11/2010	10.0		8.5	0.053		0.06								
122	Burden L-3	7/27/2010	10.0		8.5	0.091		0.10								
122	Burden L-3	8/8/2010	10.0		8.5	0.128		0.28								
122	Burden L-3	8/29/2010	10.0		8.5	0.056		0.06								
122	Burden L-3	9/14/2010	10.0		8.5	0.070		0.69								
122	Burden L-3	10/3/2010	10.0			0.013		0.08								
122	Burden L-3	6/19/2011	10.0		8.5	0.026		0.23				0.01				
122	Burden L-3	7/5/2011	10.0		8.5	0.032		0.07				0.01				
122	Burden L-3	7/26/2011	10.0		8.5	0.037		0.08				0.01				
122	Burden L-3	8/14/2011	10.0		8.5	0.070		0.10				0.01				
122	Burden L-3	9/12/2011	10.5		10.5	0.069		0.35				0.01				
122	Burden L-3	9/21/2011	10.0		8.5	0.033		0.28				0.01				
122	Burden L-3	10/2/2011	10.3		8.8	0.095		0.91				0.01				
122	Burden L-3	10/16/2011	10.0		8.5	0.135		1.54				0.01				
122	Burden L-3	6/19/2013			9.0			0.23								
122	Burden L-3	7/31/2013			8.5			0.02								
122	Burden L-3	9/4/2013			8.5	0.045		0.01								
122	Burden L-3	9/29/2013			8.5	0.004		0.08								
122	Burden L-3	6/22/2015			8.5	0.005		0.18								
122	Burden L-3	7/6/2015			8.5	0.017										
122	Burden L-3	7/26/2015			8.5	0.002		0.04								
122	Burden L-3	8/9/2015			8.0	0.067										

LNum	LName	Date	Zbot	Zsd	Zsamp	Tot.P	NOx	NH4	TDN	TN/TP	TColor	pH	Cond25	Ca	Chl.a	Cl
122	Burden L-3	8/23/2015			8.5	0.012		0.05								
122	Burden L-3	9/7/2015			8.5	0.039										
122	Burden L-3	9/20/2015			8.5	0.104		0.35								

LNum	LName	Date	Type	TAir	TH2O	QA	QB	QC	QD	QF	QG	AQ-PC	AQ-Chla	MC-LR	Ana-a	Cylin	FP-Chl	FP-BG	HAB form	Shore HAB
122	Burden L-3	5/26/1997	epi	20	16	2	1	4	5											
122	Burden L-3	6/10/1997	epi	28	24	3	1	3	3											
122	Burden L-3	6/23/1997	epi	27	25	3	1	3	134											
122	Burden L-3	7/17/1997	epi	36	28	3	3	3	1											
122	Burden L-3	8/12/1997	epi	28	25	3	2	3	13											
122	Burden L-3	6/2/1998	epi		21	3	2	3	36											
122	Burden L-3	6/13/1999	epi	39	26	2	3	3	2											
122	Burden L-3	6/23/1999	epi	33	25	2	2	3	2											
122	Burden L-3	7/11/1999	epi	25	25	2	2	2												
122	Burden L-3	7/25/1999	epi	31	29	3	2	2	6											
122	Burden L-3	8/9/1999	epi	26	25	3	2	3	35											
122	Burden L-3	8/26/1999	epi	30	25	3	3	3												
122	Burden L-3	9/13/1999	epi	25	24	2	3	2												
122	Burden L-3	9/27/1999	epi	24	18	2	1	2	5											
122	Burden L-3	5/21/2003	epi	16	18	3	3	3	25											
122	Burden L-3	6/8/2003	epi	21	19	3	3	3	25											
122	Burden L-3	6/24/2003	epi	34	24	3	3	3	28											
122	Burden L-3	7/7/2003	epi	28	28	3	3	3	235											
122	Burden L-3	7/21/2003	epi	27	25	3	3	3	235											
122	Burden L-3	8/4/2003	epi	29	27	3	3	3	2358											
122	Burden L-3	8/18/2003	epi	28	26	4	3	4	2											
122	Burden L-3	9/2/2003	epi	22	21	3	3	4	235											
122	Burden L-3	6/8/2004	epi	30	22	2	2	2	8											
122	Burden L-3	6/23/2004	epi	21	21	2	2	2	8											
122	Burden L-3	7/6/2004	epi	21	24	2	2	2	5											
122	Burden L-3	7/21/2004	epi	25	25	2	2	3	3											
122	Burden L-3	8/3/2004	epi	29	26	2	2	3	3											
122	Burden L-3	8/17/2004	epi	23	23	2	2	3	23											
122	Burden L-3	8/31/2004	epi	23	25	2	2	2	3											
122	Burden L-3	9/14/2004	epi	22	23	2	2	2	3											
122	Burden L-3	6/7/2005	epi	27	24	3	2	3	5											
122	Burden L-3	6/22/2005	epi	22	24	3	2	3	25											
122	Burden L-3	7/6/2005	epi	22	26	2	3	3	2											
122	Burden L-3	7/21/2005	epi	26	27	3	3	3	2											
122	Burden L-3	8/2/2005	epi	28	27	3	3	3	2											
122	Burden L-3	8/16/2005	epi	24	26	3	3	3	2											
122	Burden L-3	8/30/2005	epi	24	24	3	3	3	25											
122	Burden L-3	9/14/2005	epi	28	24	3	3	3	23											
122	Burden L-3	7/5/2006	epi	27	27	2	2	3	8											
122	Burden L-3	7/19/2006	epi	29	29	3	2	3	1											
122	Burden L-3	8/2/2006	epi	33	29	3	3	3	2											
122	Burden L-3	9/6/2006	epi	18	20	3	2	3	5											
122	Burden L-3	9/19/2006	epi	22	21	3	3	3	5											
122	Burden L-3	9/26/2006	epi	14	18	3	2	4	5											
122	Burden L-3	10/10/2006	epi	17	15	3	2	3	235											
122	Burden L-3	7/17/2007	epi	25	24	2	2	2	8											
122	Burden L-3	8/1/2007	epi	28	27	2	2	2	8											
122	Burden L-3	8/13/2007	epi	22	22	2	3	3	2											
122	Burden L-3	8/23/2007	epi	24	21	3	3	3	5											
122	Burden L-3	9/4/2007	epi	20	21	3	3	3	2											
122	Burden L-3	9/13/2007	epi	17	19	3	3	3	236											
122	Burden L-3	9/25/2007	epi	19	19	3	3	3	2											
122	Burden L-3	10/3/2007	epi	22	19	3	3	3	25											
122	Burden L-3	6/17/2008	epi	19	22	3	2	3	12											
122	Burden L-3	7/1/2008	epi	24	22	3	2	3	2											
122	Burden L-3	7/14/2008	epi	20	23	3	3	3	25											

LNum	LName	Date	Type	TAir	TH2O	QA	QB	QC	QD	QF	QG	AQ-PC	AQ-Chla	MC-LR	Ana-a	Cylin	FP-Chl	FP-BG	HAB form	Shore HAB
122	Burden L-3	8/3/2008	epi	20	25	3	3	3	2											
122	Burden L-3	8/20/2008	epi	15	19	3	3	3	2											
122	Burden L-3	9/8/2008	epi	21	20	4	3		0											
122	Burden L-3	9/23/2008	epi	18	17	3	3	4	123											
122	Burden L-3	10/7/2008	epi	8	13	2	2	2	25											
122	Burden L-3	06/29/2009	epi	16	21	3	3	3	25											
122	Burden L-3	07/12/2009	epi	16	22	3	2	3	2											
122	Burden L-3	07/26/2009	epi			3	3	3	5											
122	Burden L-3	08/09/2009	epi	20	21	3	2	3	2											
122	Burden L-3	08/23/2009	epi	18	23	3	3	3	1235											
122	Burden L-3	09/06/2009	epi	17	21	3	3	3	2			70.53								
122	Burden L-3	09/20/2009	epi	14	17	3	3	3	2			76.15								
122	Burden L-3	6/13/2010	epi	14	17	3	2	3	5	0	0	36.82								
122	Burden L-3	6/27/2010	epi	24	23	3	2	2	5	0	0									
122	Burden L-3	7/11/2010	epi	24	27	3	3	3	127	0	0									
122	Burden L-3	7/27/2010	epi	22	22	3	3	3	3	0	0									
122	Burden L-3	8/8/2010	epi	20	24	3	3	3	2	0	0									
122	Burden L-3	8/29/2010	epi	23	21	3	3	3	23	0	0	43.85								
122	Burden L-3	9/14/2010	epi	18	18	3	3	4	25	0	0									
122	Burden L-3	10/13/2010	epi																	
122	Burden L-3	6/19/2011	epi	21	20	3	2	2	0	0	0									
122	Burden L-3	7/5/2011	epi	23	22	3	3	3	28	0	0	2.80	0.80							
122	Burden L-3	7/26/2011	epi	22	24	3	3	3	2	0	0	8.30	1.00							
122	Burden L-3	7/26/2011	bloom									21.60	2.60	0.51	<0.5	<0.1				
122	Burden L-3	8/14/2011	epi	20	22	3	3	3	2	4	0									
122	Burden L-3	8/14/2011	bloom									41.80	2.40	0.15	<0.5	<0.1				
122	Burden L-3	9/12/2011	epi	18	20	3	2	3	3	0	0			0.30	<0.9	<0.1				
122	Burden L-3	9/21/2011	epi	16	18	3	2	3	238	0	0	28.60	1.50							
122	Burden L-3	10/2/2011	epi	11	16	3	2	4	235	0	0	38.70	2.90	0.15	<0.9	<0.1				
122	Burden L-3	10/16/2011	epi	14	12	3	2	3	5	0	0	34.50	2.10							
122	Burden L-3	6/19/2013	epi	12	17	2	2	2	0	0	0	2.10	0.90	<0.30	<0.440		0.80	0.00	I	I
122	Burden L-3	7/16/2013	epi	24	26	2	2	2	0	0	0	7.20	1.90	<0.30	<0.910		2.30	0.20	FG	FG
122	Burden L-3	7/31/2013	epi	21	23	2	2	2	2	0	0	4.70	8.80	<0.30	<0.380		9.70	0.80	F	F
122	Burden L-3	8/18/2013	epi	18	20	2	3	2	25	0	0	22.20	2.90	<0.30	<0.390		4.50	2.20	F	I
122	Burden L-3	9/4/2013	epi	20	21	2	3	3	2	0	0	21.40	2.50	<0.30	<0.570		5.00	1.70	F	F
122	Burden L-3	9/15/2013	epi	18	16	2	3	2	2	0	0	19.10	3.30	0.40	<19.130		2.60	0.50	F	F
122	Burden L-3	9/29/2013	epi	20	17	2	3	3	58			5.70	1.30	<0.30	<10.600		0.80	0.10	FH	F
122	Burden L-3	9/29/2013	bloom											1.13	<0.110		73.20	69.00		bf
122	Burden L-3	10/14/2013	epi	16	15	3	3	3	235			312.60	5.00	<0.30	<0.090		31.80	28.50	ad	bdf
122	Burden L-3	6/17/2014	epi	23	20	2	3	3	2	0	0	0.05	0.20	<0.53	<0.08	<0.002	0.30	0.00		f
122	Burden L-3	6/29/2014	epi	22	21	2	4	3	2	0	0	1.10	0.30	<1.60	<0.48	<0.002	0.50	0.00	f	f
122	Burden L-3	7/13/2014	epi	19	23	2	3	3	2	0	0	2.30	0.30	<0.40	<0.21	<0.003	0.70	0.00	f	f
122	Burden L-3	7/29/2014	epi	19	22	2	3	3	2	0	0	2.90	0.30	<0.31	<0.24	<0.002	0.60	0.00	f	f
122	Burden L-3	8/10/2014	epi	24	22	2	3	2	2	0	0	2.70	0.20	<0.28	<0.05	<0.001	0.30	0.00	f	f
122	Burden L-3	8/24/2014	epi	19	10	2	3	2	2	0	0	12.50	0.30	<1.06	<0.16	<0.002	1.30	0.50	f	f
122	Burden L-3	9/7/2014	epi	21	21	3	3	3	2	0	0	4.30	0.20	<0.64	<0.03	<0.001	1.30	0.40	f	f
122	Burden L-3	9/23/2014	bloom											<0.97	<0.08	<0.002	4.40	3.00		
122	Burden L-3	9/23/2014	epi	13	17	3	3	3	23	0	0	20.00	0.40	<0.49	<0.12	<0.001	4.50	2.70	f	f
122	Burden L-3	6/22/2015	epi	21	21	3	3	3	25	0	0	2.90	0.60	<0.65	<0.004	<0.001	1.84	0.00	F	I
122	Burden L-3	7/6/2015	epi	27	21	3	2	2	2	0	0	8.00	0.60	<0.86	<0.008	<0.046	1.73	0.23	F	I
122	Burden L-3	7/26/2015	epi	23	22	3	2	3	2	0	0	11.80	0.30	<0.30	<0.002	<0.014	1.39	0.31	F	F
122	Burden L-3	8/9/2015	epi	21	23	2	2	2	2	0	0	2.70	0.60	<0.18	<0.002	<0.009	0.99	0.00	F	I
122	Burden L-3	8/23/2015	epi	23	23	2	2	2	2			3.80	0.40	<0.21	<0.003	<0.010	1.08	0.29	F	I
122	Burden L-3	9/7/2015	epi	23	22	2	2	2	27	0	0	6.80	0.40	<0.26	<0.023	<0.086	1.31	0.09	F	I
122	Burden L-3	9/27/2015	epi											<1.20	0.04	<0.032	2.57	1.27		
122	Burden L-3	9/20/2015	epi	18	21	3	2	3	25	0	0	12.00	0.40	<0.39	<0.009	<0.022	2.28	0.55	F	I
122	Burden L-3	5/21/2003	hypo		12															
122	Burden L-3	6/8/2003	hypo		11															
122	Burden L-3	6/24/2003	hypo		20															
122	Burden L-3	7/7/2003	hypo		14															
122	Burden L-3	7/21/2003	hypo		14															

LNum	LName	Date	Type	TAir	TH2O	QA	QB	QC	QD	QF	QG	AQ-PC	AQ-Chla	MC-LR	Ana-a	Cylin	FP-Chl	FP-BG	HAB form	Shore HAB
122	Burden L-3	8/4/2003	hypo		16															
122	Burden L-3	8/18/2003	hypo		16															
122	Burden L-3	9/2/2003	hypo		14															
122	Burden L-3	6/8/2004	hypo		14															
122	Burden L-3	6/23/2004	hypo		15															
122	Burden L-3	7/6/2004	hypo		14															
122	Burden L-3	7/21/2004	hypo		18															
122	Burden L-3	8/3/2004	hypo		16															
122	Burden L-3	8/17/2004	hypo		16															
122	Burden L-3	8/31/2004	hypo		18															
122	Burden L-3	9/14/2004	hypo		17															
122	Burden L-3	6/7/2005	hypo		15															
122	Burden L-3	6/22/2005	hypo		14															
122	Burden L-3	7/6/2005	hypo		16															
122	Burden L-3	7/21/2005	hypo		14															
122	Burden L-3	8/2/2005	hypo		16															
122	Burden L-3	8/16/2005	hypo		16															
122	Burden L-3	8/30/2005	hypo		15															
122	Burden L-3	9/14/2005	hypo		16															
122	Burden L-3	7/5/2006	hypo		9															
122	Burden L-3	7/19/2006	hypo		24															
122	Burden L-3	8/2/2006	hypo		16															
122	Burden L-3	9/6/2006	hypo		15															
122	Burden L-3	9/19/2006	hypo		16															
122	Burden L-3	9/26/2006	hypo		15															
122	Burden L-3	10/10/2006	hypo		14															
122	Burden L-3	7/17/2007	hypo		14															
122	Burden L-3	8/1/2007	hypo		14															
122	Burden L-3	8/13/2007	hypo		15															
122	Burden L-3	8/23/2007	hypo		14															
122	Burden L-3	9/4/2007	hypo		13															
122	Burden L-3	9/13/2007	hypo		14															
122	Burden L-3	9/25/2007	hypo		14															
122	Burden L-3	10/3/2007	hypo		15															
122	Burden L-3	6/17/2008	hypo		11															
122	Burden L-3	7/1/2008	hypo		11															
122	Burden L-3	7/14/2008	hypo		14															
122	Burden L-3	8/3/2008	hypo		18															
122	Burden L-3	8/20/2008	hypo		12															
122	Burden L-3	9/8/2008	hypo		15															
122	Burden L-3	9/23/2008	hypo		14															
122	Burden L-3	10/7/2008	hypo		11															
122	Burden L-3	06/29/2009	hypo		12															
122	Burden L-3	07/12/2009	hypo		12															
122	Burden L-3	08/09/2009	hypo		13															
122	Burden L-3	08/23/2009	hypo		14															
122	Burden L-3	09/06/2009	hypo		12															
122	Burden L-3	09/20/2009	hypo		13															
122	Burden L-3	6/13/2010	hypo		12															
122	Burden L-3	6/27/2010	hypo		12															
122	Burden L-3	7/11/2010	hypo		16															
122	Burden L-3	7/27/2010	hypo		18															
122	Burden L-3	8/8/2010	hypo		13															
122	Burden L-3	8/29/2010	hypo		16															
122	Burden L-3	9/14/2010	hypo		14															
122	Burden L-3	6/19/2011	hypo		13															
122	Burden L-3	7/5/2011	hypo		13															
122	Burden L-3	7/26/2011	hypo		14															
122	Burden L-3	8/14/2011	hypo		14															
122	Burden L-3	9/12/2011	hypo		14															
122	Burden L-3	9/21/2011	hypo		15															

LNum	LName	Date	Type	TAir	TH2O	QA	QB	QC	QD	QF	QG	AQ-PC	AQ-Chla	MC-LR	Ana-a	Cylin	FP-Chl	FP-BG	HAB form	Shore HAB
122	Burden L-3	10/2/2011	hypo		14															
122	Burden L-3	10/16/2011	hypo		12															
122	Burden L-3	6/19/2013	hypo		11															
122	Burden L-3	7/31/2013	hypo		14															
122	Burden L-3	9/4/2013	hypo		16															
122	Burden L-3	9/29/2013	hypo		16															
122	Burden L-3	6/22/2015	hypo		21															
122	Burden L-3	7/6/2015	hypo		21															
122	Burden L-3	7/26/2015	hypo		22															
122	Burden L-3	8/9/2015	hypo		23															
122	Burden L-3	8/23/2015	hypo		23															
122	Burden L-3	9/7/2015	hypo		22															
122	Burden L-3	9/27/2015	hypo																	
122	Burden L-3	9/20/2015	hypo		21															

Legend Information

Indicator	*Description*	*Detection Limit*	*Standard (S) / Criteria (C)*
General Information			
Lnum	lake number (unique to CSLAP)		
Lname	name of lake (as it appears in the Gazetteer of NYS Lakes)		
Date	sampling date		
Field Parameters			
Zbot	lake depth at sampling point, meters (m)		
Zsd	Secchi disk transparency or clarity	0.1m	1.2m (C)
Zsamp	water sample depth (m) (epi = epilimnion or surface; bot = bottom)	0.1m	none
Tair	air temperature (C)	-10C	none
TH20	water temperature (C)	-10C	none
Laboratory Parameters			
Tot.P	total phosphorus (mg/l)	0.003 mg/l	0.020 mg/l (C)
NOx	nitrate + nitrite (mg/l)	0.01 mg/l	10 mg/l NO3 (S), 2 mg/l NO2 (S)
NH4	total ammonia (mg/l)	0.01 mg/l	2 mg/l NH4 (S)
TN	total nitrogen (mg/l)	0.01 mg/l	none
TN/TP	nitrogen to phosphorus (molar) ratio, = (TKN + NOx)*2.2/TP		none
TCOLOR	true (filtered) color (ptu, platinum color units)	1 ptu	none
pH	powers of hydrogen (S.U., standard pH units)	0.1 S.U.	6.5, 8.5 S.U. (S)
Cond25	specific conductance, corrected to 25C (umho/cm)	1 umho/cm	none
Ca, Cl	Calcium, chloride (mg/l)	1 mg/l	none
Chl.a	chlorophyll a (ug/l)	0.01 ug/l	none
Fe	iron (mg/l)	0.1 mg/1	1.0 mg/l (S)
Mn	manganese (mg/l)	0.01 mg/l	0.3 mg/l (S)
As	arsenic (ug/l)	1 ug/l	10 ug/l (S)
AQ-PC	Phycocyanin (aquaflor) (unitless)	1 unit	none
AQ-Chl	Chlorophyll *a* (aquaflor) (ug/l)	1 ug/l	none
MC-LR	Microcystis-LR (ug/l)	0.01 ug/l	1 ug/l potable (C) 20 ug/l swimming (C)
Ana	Anatoxin-a (ug/l)	variable	none
Cyl	Cylindrospermposin (ug/l)	0.1 ug/l	none
FP-Chl, FP-BG	Fluoroprobe total chlorophyll, fluoroprobe blue-green chlorophyll (ug/l)	0.1 ug/l	none
Lake Assessment			
QA	water quality assessment; 1 = crystal clear, 2 = not quite crystal clear, 3 = definite algae greenness, 4 = high algae levels, 5 = severely high algae levels		
QB	aquatic plant assessment; 1 = no plants visible, 2 = plants below surface, 3 = plants at surface, 4 = plants dense at surface, 5 = surface plant coverage		
QC	recreational assessment; 1 = could not be nicer, 2 = excellent, 3 = slightly impaired, 4 = substantially impaired, 5 = lake not usable		
QD	reasons for recreational assessment; 1 = poor water clarity, 2 = excessive weeds, 3 = too much algae, 4 = lake looks bad, 5 = poor weather, 6 = litter/surface debris, 7 = too many lake users, 8 = other		
QF, QG	Health and safety issues today (QF) and past week (QG); 0 = none, 1 = taste/odor, 2 = GI illness humans/animals, 3 = swimmers itch, 4 = algae blooms, 5 = dead fish, 6 = unusual animals, 7 = other		
HAB form, Shore HAB	HAB evaluation; A = spilled paint, B = pea soup, C = streaks, D = green dots, E = bubbling scum, F = green/brown tint, G = duckweed, H = other, I = no bloom		

Appendix B- Priority Waterbody Listing for Burden Lake

Burdens Lake (1301-0025) MinorImpacts

Waterbody Location Information

Revised: 04/28/2008

Water Index No:	H-235-P386			**Drain Basin:**	Lower Hudson River
Hydro Unit Code:	02020006/020	**Str Class:**	B		Middle Hudson River
Waterbody Type:	Lake			**Reg/County:**	4/Rensselaer Co. (42)
Waterbody Size:	355.5 Acres			**Quad Map:**	NASSAU (K-26-3)
Seg Description:	entire lake				

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Recreation	Stressed	Suspected

Type of Pollutant(s)

Known:	ALGAL/WEED GROWTH (aquatic veg, algal blooms)
Suspected:	Nutrients
Possible:	D.O./Oxygen Demand, Pathogens

Source(s) of Pollutant(s)

Known:	HABITAT MODIFICATION
Suspected:	Other Source (nutrient recycling)
Possible:	On-Site/Septic Syst

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: ext/WQCC **Resolution Potential:** Medium
TMDL/303d Status: n/a

Further Details

Overview
Recreational uses in Burden Lake are thought to experience minor impacts due to aquatic week growth and occasional algal blooms. Nutrient loads to the lake are fairly low, but phosphorus releases from lake bottom sediments may have impact.

Water Quality Sampling
Third Burden Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 1996 and again most recently in 2006. An Interpretive Summary report of the findings of this sampling was published in 2007. These data indicate that the lake continues to be best characterized as mesotrophic, or moderately productive. Phosphorus levels in the lake rarely exceed the state guidance values indicating impacted/stressed recreational uses. Corresponding transparency measurements typically meet what is recommended for swimming beaches. Measurements of pH typically fall within the state water quality range of 6.5 to 8.5; occasional high pH does not appear to cause any ecological impacts. The lake water is weakly colored, and not likely to influence clarity of the lake. (DEC/DOW, BWAM/CSLAP, September 2007)

Recreational Assessment

Public perception of the lake and its uses is also evaluated as part of the CSLAP program. This assessment indicates recreational suitability of the lake to be generally favorable since the lake was first evaluated and continuing through the most recent assessment. The recreational suitability of the lake is described most frequently as "slightly" impacted for most recreational uses. The lake itself is most often described as "not quite crystal clear" or having "definite algal greenness," assessments that are consistent with measured water quality characteristics. The more favorable assessment may be influenced by the lack of impact from aquatic weed growth. Assessments have noted that aquatic plant growth reaches the lake surface. Recreational use impacts due to aquatic weed growth have also been noted. The lakes are treated with aquatic herbicide (Sonar) to control Eurasian milfoil and pondweed. (DEC/DOW, BWAM/CSLAP, September 2007)

Previous Assessment

Impacts on recreational uses of Burden Lake by various inputs related to residential development along the lake were noted previously. Excessive weed growth, poor water clarity and algal blooms were attributed to silt/sediment and nutrient loads. Failing and/or inadequate on-site septic systems serving some homes along the lake were identified as possible source. However sampling indicates these sources are more of future threat, than actual source of current impacts. (DEC/DOW, BWAM/WQAS, 2008)

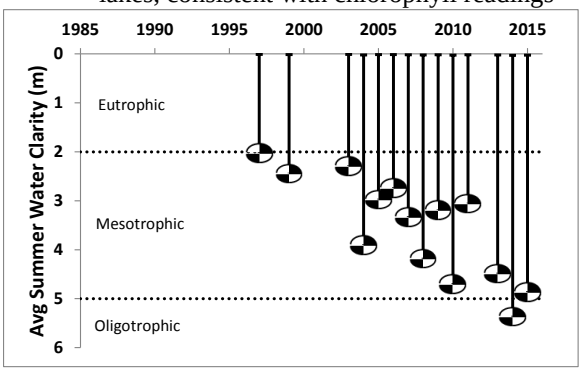
Lake Uses

This lake waterbody is designated class B, suitable for use as a public bathing beach, general recreation and aquatic life support, but not as a water supply. Water quality monitoring by NYSDEC focuses primarily on support of general recreation and aquatic life. Samples to evaluate the bacteriological condition and bathing use of the lake or to evaluate contamination from organic compounds, metals or other inorganic pollutants have not been collected as part of the CSLAP monitoring program. Monitoring to assess public bathing use is generally the responsibility of state and/or local health departments.

Appendix C- Long Term Trends: Burden (Third) Lake

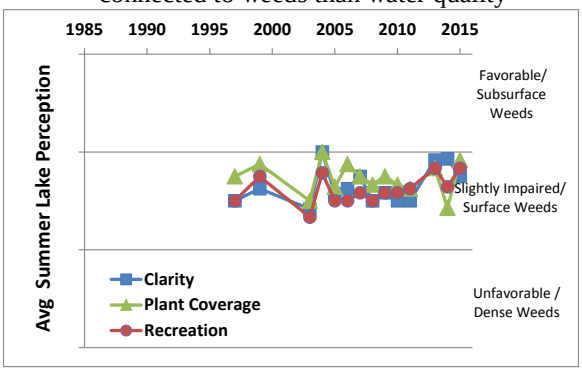
Long Term Trends: Water Clarity

- Increasing water clarity since late 1990s
- Most readings now typical of *mesotrophic* lakes, consistent with chlorophyll readings



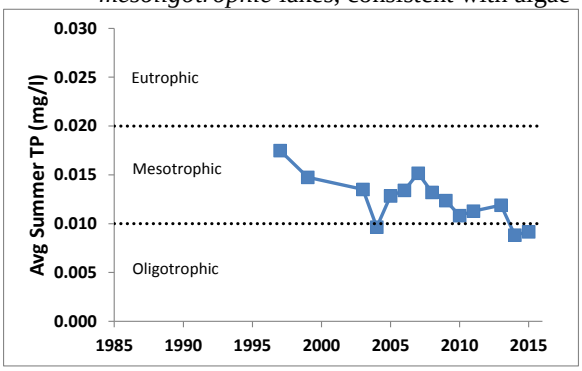
Long Term Trends: Lake Perception

- No clear trends
- Recreational perception more closely connected to weeds than water quality



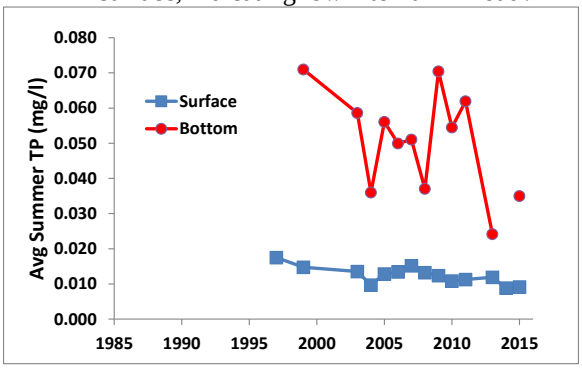
Long Term Trends: Phosphorus

- Decreasing since late 1990s
- Most readings now typical of *mesoligotrophic* lakes, consistent with algae



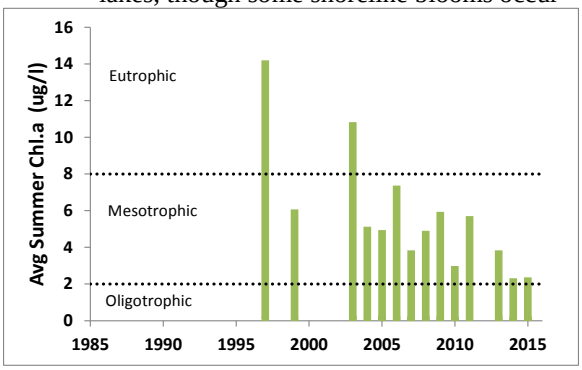
Long Term Trends: Bottom Phosphorus

- Slight decrease in deepwater TP?
- Bottom TP readings not much different than surface, indicating low internal TP load?



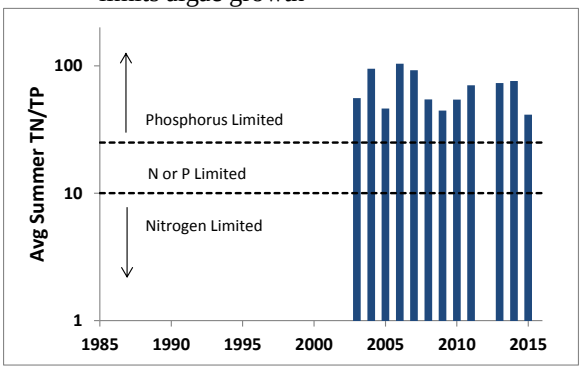
Long Term Trends: Chlorophyll a

- Decreasing significantly since late 1990s
- Most readings typical of *mesoligotrophic* lakes, though some shoreline blooms occur



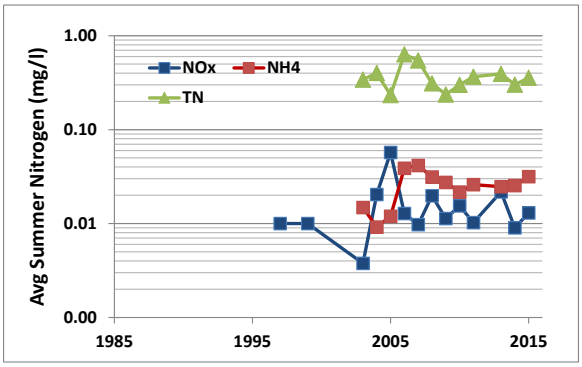
Long Term Trends: N:P Ratio

- No trends apparent, but lower in 2015
- Most readings indicate phosphorus likely limits algae growth



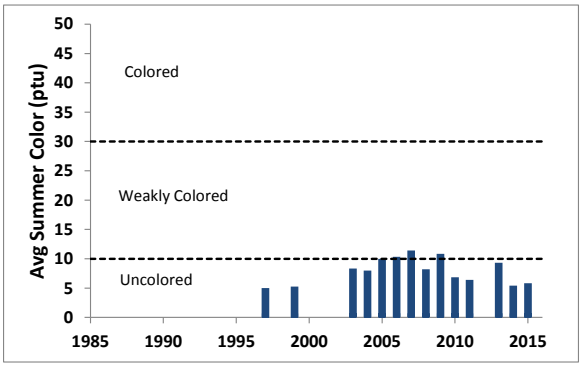
Long Term Trends: Nitrogen

- No clear trends w/any nitrogen indicators
- Low NOx, ammonia, and TN



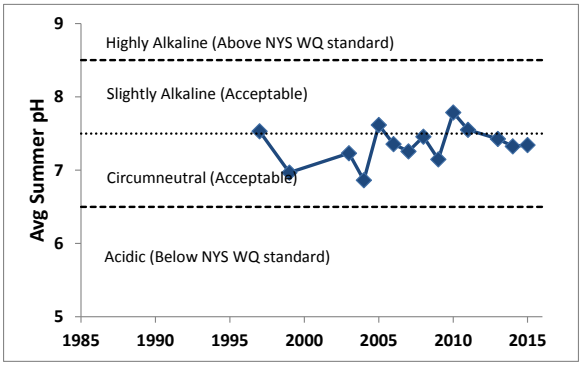
Long Term Trends: Color

- Recent decrease after increase 03-08
- Most readings typical of *uncolored* to *weakly colored* lakes



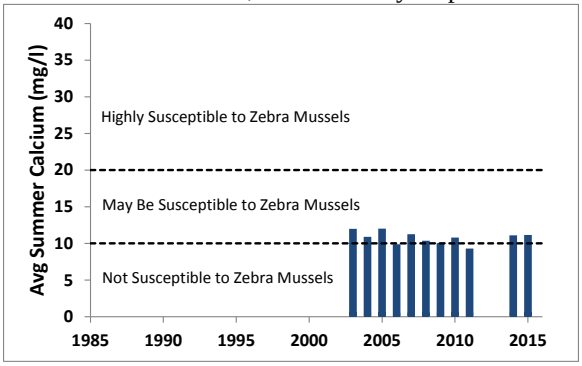
Long Term Trends: pH

- Perhaps slight increase, but no clear trend
- Most readings typical of *slightly alkaline* to *circumneutral* lakes



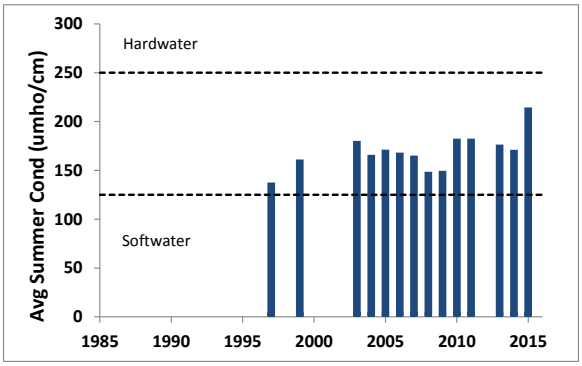
Long Term Trends: Calcium

- No clear trend
- Most readings indicate low susceptibility to zebra mussels, but these may be present



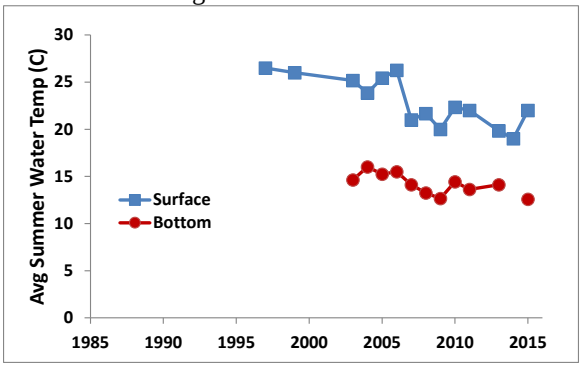
Long Term Trends: Conductivity

- Generally increasing since late 1990s
- Most readings typical of lakes with *intermediate* hardness



Long Term Trends: Water Temperature

- Decreasing surface and bottom temperatures
- Deepwater temperature slightly lower, indicating moderate thermal stratification



Appendix D:
Algae Testing Results from SUNY ESF Study

Most algae are harmless, naturally present, and an important part of the food web. However excessive algae growth can cause health, recreational, and aesthetic problems. Some algae can produce toxins that can be harmful to people and animals. High quantities of these algae are called harmful algal blooms (HABs). CSLAP lakes have been sampled for a variety of HAB indicators since 2008. This was completed on selected lakes as part of a NYS DOH study from 2008-2010. In 2011, enhanced sampling on all CSLAP lakes was initiated through an EPA-funded project that has continued through the current sampling season. This study has evaluated a number of HAB indicators as follows:

- Algae types - blue green, green, diatoms, and "other"
- Algae densities
- Microscopic analysis of bloom samples
- Algal toxin analysis

Some of these results are reported in other portions of these reports. This appendix the seasonal change in blue green algae, other algae types, and the primary algal toxin (microcystin-LR, a liver toxin). Analysis was completed on open water samples and, for some lakes, shoreline samples that were collected when visual evidence of blooms were apparent. Results are compared to the DEC criteria of 25-30 ug/l blue green chlorophyll a and 20 ug/l microcystin-LR (based on the World Health Organization (WHO) threshold for unsafe swimming conditions) and the WHO provisional criteria for long-term protection of treated water supplies (= 1 ug/l microcystin-LR). The data for algae types are drawn from a high end fluorometer used by SUNY ESF. While these results are useful for timely approximation of lake conditions, they are not as accurate as the total chlorophyll results measured as a regular part of CSLAP since 1986 in all open water samples. Therefore these results are used judiciously in the assessment of sampled waterbodies.

Two separate samples are evaluated. A sample is taken at the CSLAP sample point at the deepest point of the lake at every sample session. In addition, shoreline samples can be taken when a bloom is visible. It should be noted that shoreline conditions can vary significantly over time and from one location to another. The shoreline bloom sampling results summarized below are not collected as routinely as open water samples, and therefore represent snapshots in time. It is assumed that sampling results showing high blue green algae and/or toxin levels indicate that algae blooms may be common and/or widespread on these lakes. However, the absence of elevated blue green algae and toxin levels does not assure the lack of shoreline blooms on these lakes. Elevated open water readings may indicate a higher likelihood of shoreline blooms, but in some lakes, these shoreline blooms have not been (well) documented.

The results from these samples are summarized within the CSLAP report for the lake.

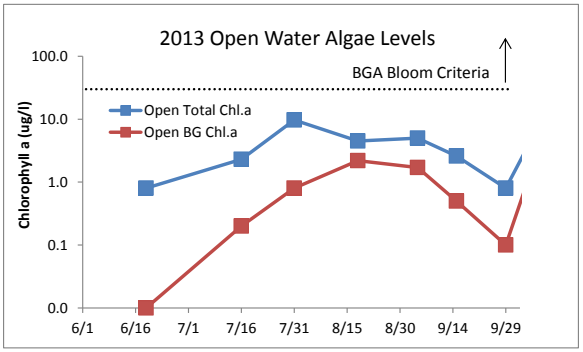


Figure D1:
2013 Open Water Total and BGA Chl.a

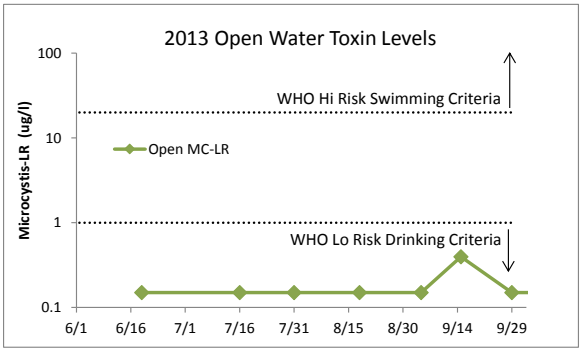


Figure D2:
2013 Open Water Microcystin-LR

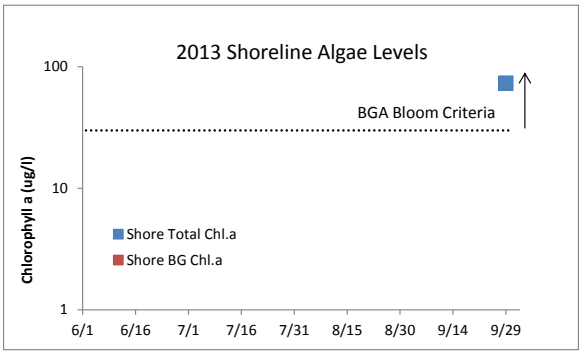


Figure D3:
2013 Shoreline Total and BGA Chl.a

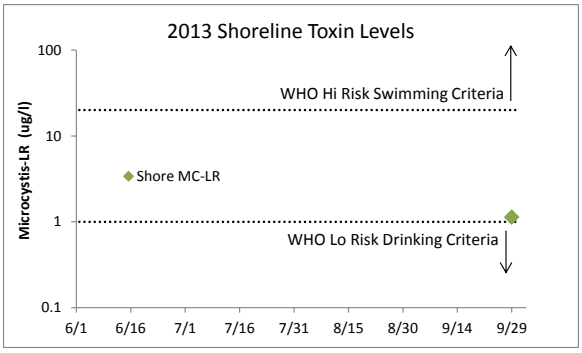


Figure D4:
2013 Shoreline Microcystin-LR

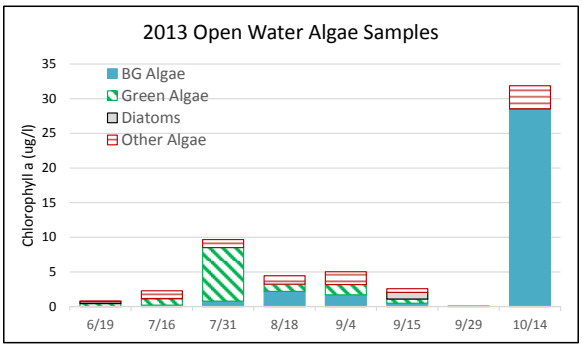


Figure D5:
2013 Open Water Algae Types

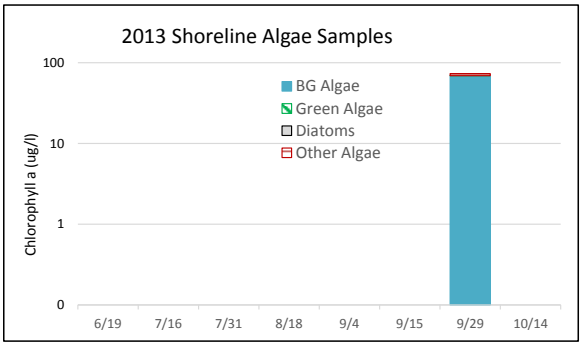


Figure D6:
2013 Shoreline Algae Types

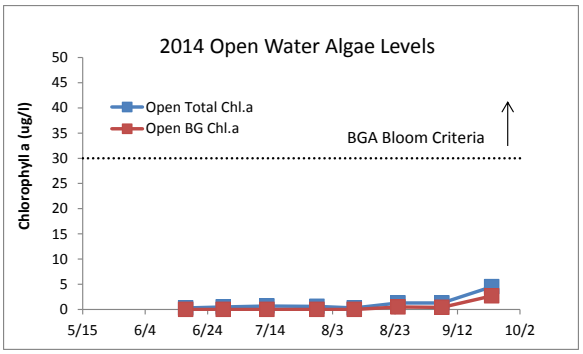


Figure D7:
2014 Open Water Total and BGA Chl.a

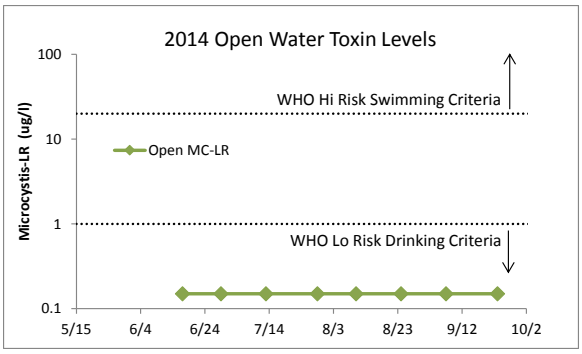


Figure D8:
2014 Open Water Microcystin-LR

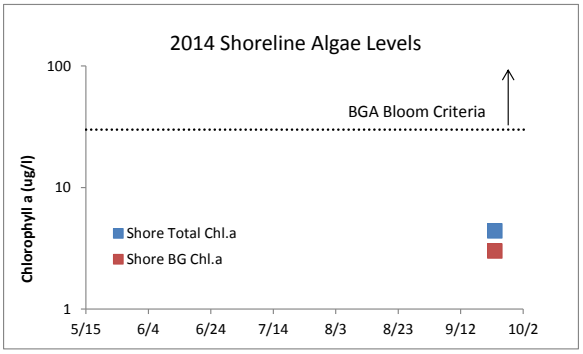


Figure D9:
2014 Shoreline Total and BGA Chl.a

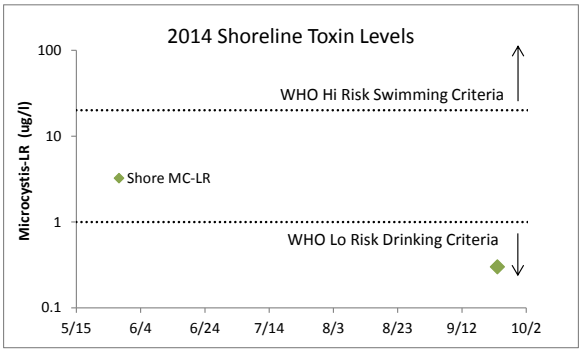


Figure D10:
2014 Shoreline Microcystin-LR

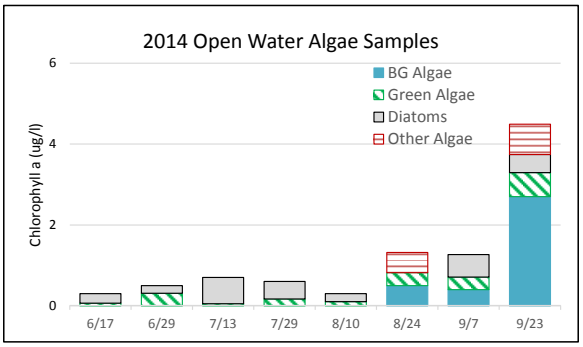


Figure D11:
2014 Open Water Algae Types

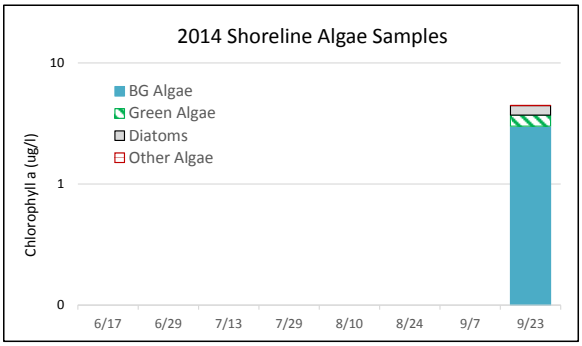


Figure D12:
2014 Shoreline Algae Types

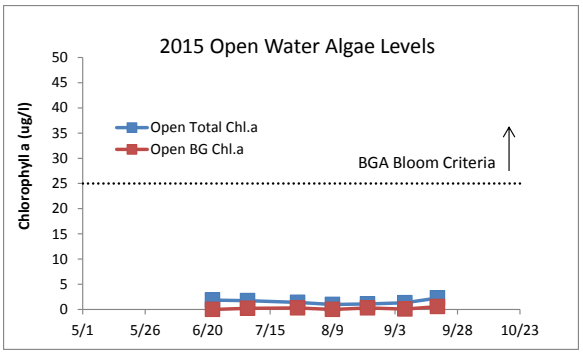


Figure D7:
2015 Open Water Total and BGA Chl.a

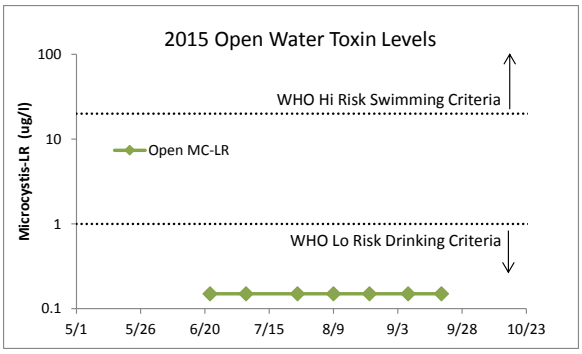


Figure D8:
2015 Open Water Microcystin-LR

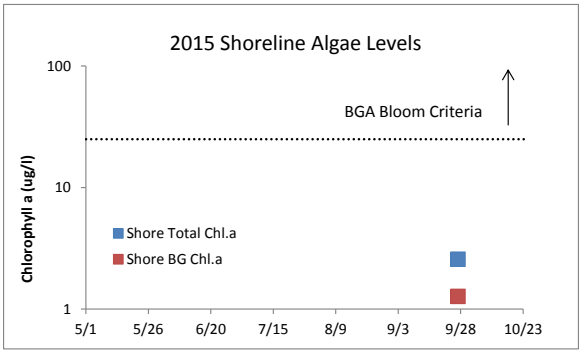


Figure D9:
2015 Shoreline Total and BGA Chl.a

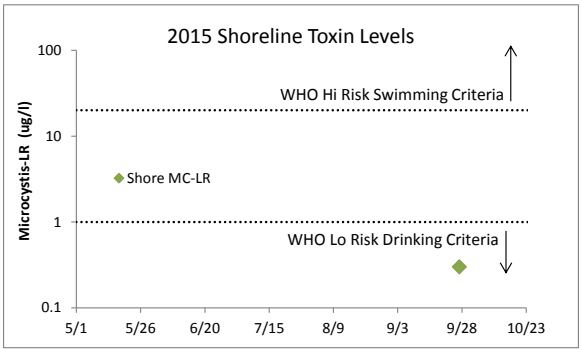


Figure D10:
2015 Shoreline Microcystin-LR

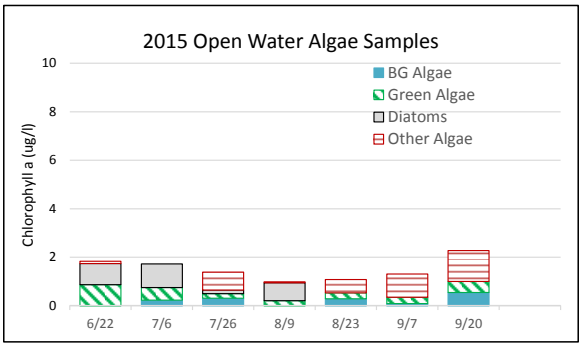


Figure D11:
2015 Open Water Algae Types

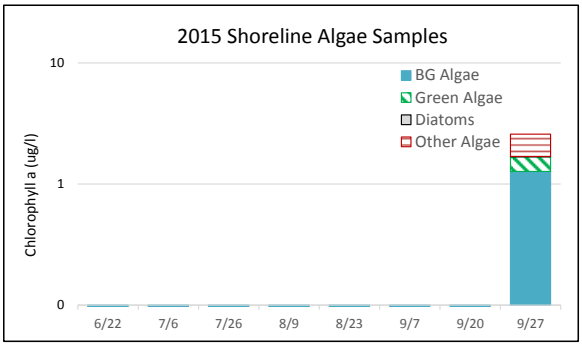


Figure D12:
2015 Shoreline Algae Types

Appendix E:
AIS Species in Rensselaer County

The table below shows the invasive aquatic plants and animals that have been documented in Rensselaer County, as cited in either the iMapInvasives database (http://www.imapinvasives.org/) or in the NYSDEC Division of Water database. These databases may include some, but not all, non-native plants or animals that have not been identified as "Prohibited and Regulated Invasive Species" in New York state regulations (6 NYCRR Part 575; http://www.dec.ny.gov/docs/lands_forests_pdf/islist.pdf).

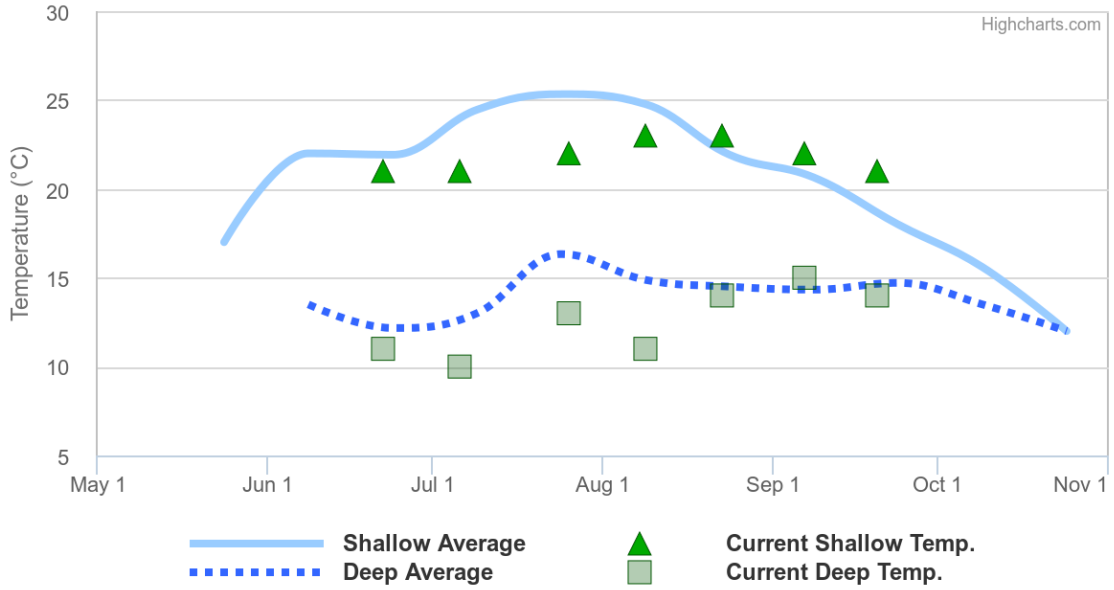
This list is not complete, but instead represents only those species that have been reported and verified within the county. If any additional aquatic invasive species (AIS) are known or suspected in these or other waterbodies in the county, this information should be reported through iMap invasives or by contacting NYSDEC at dowinfo@dec.ny.gov.

Aquatic Invasive Species – Rensselaer County			
Waterbody	**Kingdom**	**Common name**	**Scientific name**
Burden Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Burden Lake	Animal	Virile crayfish	*Orconectes virilis*
Burden Lake	Plant	Curly leafed pondweed	*Potamogeton crispus*
Burden Lake	Plant	Water chestnut	*Trapa natans*
Burden First Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Burden First Lake	Plant	Water chestnut	*Trapa natans*
Burden Second Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Burden Second Lake	Plant	Curly leafed pondweed	*Potamogeton crispus*
Burden Third Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Burden Third Lake	Plant	Curly leafed pondweed	*Potamogeton crispus*
Castleton Reservoir	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Coopers Pond	Plant	Curly leafed pondweed	*Potamogeton crispus*
Crooked Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Crystal Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Crystal Lake	Animal	Virile crayfish	*Orconectes virilis*
Glass Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Glass Lake	Animal	Virile crayfish	*Orconectes virilis*
Golden Pond	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Golden Pond	Plant	Water chestnut	*Trapa natans*
Hampton Manor Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Hampton Manor Lake	Plant	Curly leafed pondweed	*Potamogeton crispus*
Hampton Manor Lake	Plant	Water chestnut	*Trapa natans*
Hudson River	Animal	Zebra mussel	*Dreissena polymorpha*
Hudson River	Plant	Water chestnut	*Trapa natans*

Waterbody	Kingdom	Common name	Scientific name
Hudson River (Schodack Island Park)	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Johnsonville Reservoir	Plant	Water chestnut	*Trapa natans*
Johnsonville Reservoir	**Plant**	**Eurasian watermilfoil**	***Myriophyllum spicatum***
Links Pond	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Links Pond	Plant	Water chestnut	*Trapa natans*
Long Pond	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Mill Pond	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Nassau Lake	Plant	Curly leafed pondweed	*Potamogeton crispus*
Nassau Lake	Plant	Water chestnut	*Trapa natans*
Pine Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Pine Lake	**Plant**	**Water chestnut**	***Trapa natans***
Racquet Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Red Pond	Animal	Virile crayfish	*Orconectes virilis*
Reichards Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Second Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Shaver Pond	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Snyders Lake	Animal	Zebra mussel	*Dreissena polymorpha*
Snyders Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Snyders Lake	Plant	Brittle naiad	*Najas minor*
Snyders Lake	Plant	Curly leafed pondweed	*Potamogeton crispus*
Tamarack Pond	Plant	Water chestnut	*Trapa natans*
Tomhannock Lake	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Troy Reservoir	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*
Vanderhyden Reservoir	Plant	Eurasian watermilfoil	*Myriophyllum spicatum*

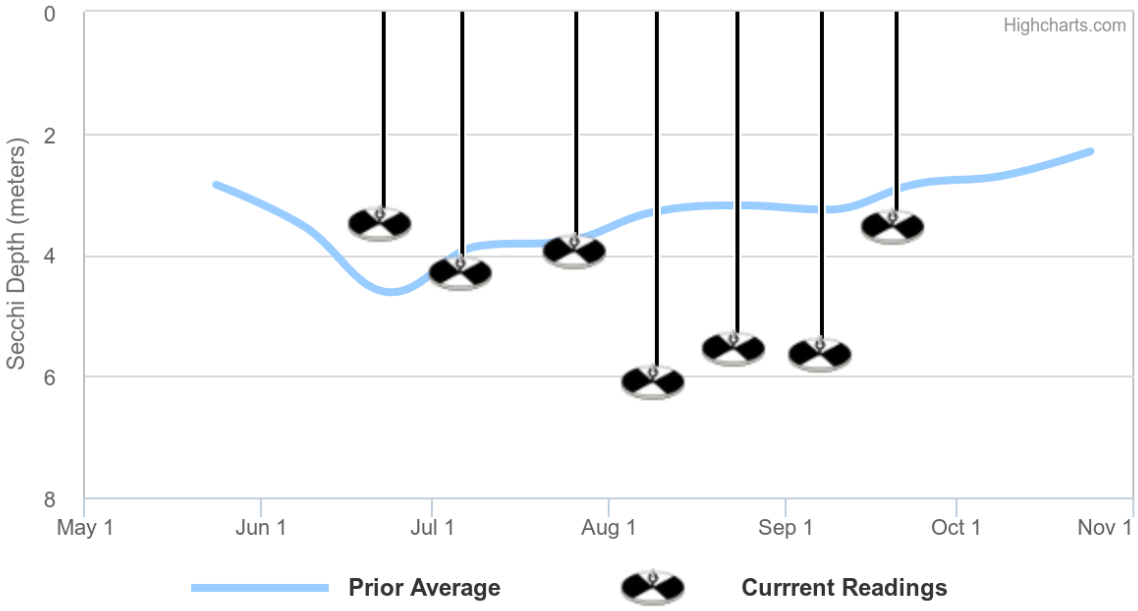
Appendix F: Current Year vs. Prior Averages for Burden Lake

Current Year Water Temperatures vs. Prior Average



This year's shallow water sample temperatures are tending to be lower than normal when compared to the average of readings collected from 1997 to 2014. This year's deep water sample temperatures are tending to be lower than normal when compared to the average of readings collected from 2005 to 2013.

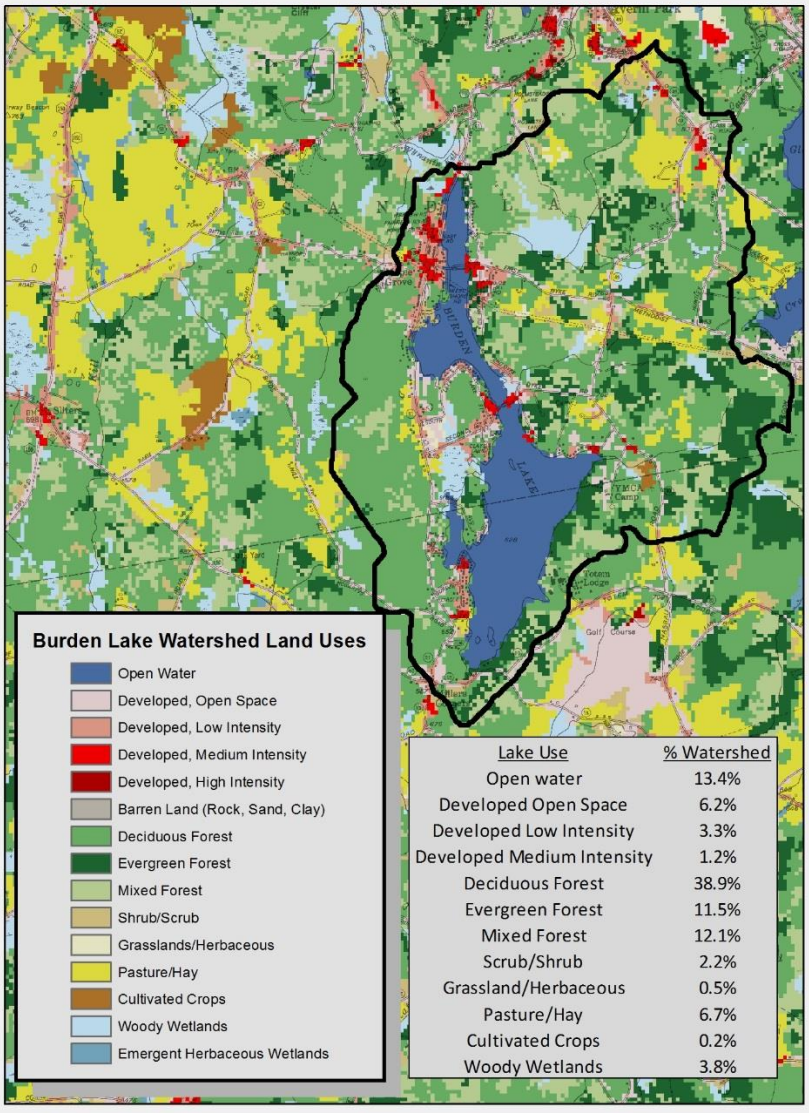
Current Year Secchi Readings vs. Prior Average



This year's session Secchi readings are tending to be higher than normal when compared to the average of readings collected from 1997 to 2014

Appendix G: Watershed and Land Use Map for Burden Lake

This watershed and land use map was developed using USGS StreamStats and ESRI ArcGIS using the 2006 land use satellite imagery. The actual watershed map and present land uses within this watershed may be slightly different due to the age of the underlying data and some limits to the use of these tools in some geographic regions and under varying flow conditions. However, these maps are intended to show the approximate extent of the lake drainage basin and the major land uses found within the boundaries of the basin.



Lake Use	% Watershed
Open water	13.4%
Developed Open Space	6.2%
Developed Low Intensity	3.3%
Developed Medium Intensity	1.2%
Deciduous Forest	38.9%
Evergreen Forest	11.5%
Mixed Forest	12.1%
Scrub/Shrub	2.2%
Grassland/Herbaceous	0.5%
Pasture/Hay	6.7%
Cultivated Crops	0.2%
Woody Wetlands	3.8%